Sustainable Airport Areas International Seminar
3rd edition - SYNTHESIS

Paris-CDG Airport Area
24-25 October 2013

Airport areas in the world, major global hubs in particular, are experiencing strong economic growth. In an increasingly globalized context, these areas profit from their international connectivity and trade and can therefore be seen as gateways to the world. The key challenge for airport areas is to realize economic prosperity for the long-term and to be profitable to all. This is what was discussed during the third edition of the Sustainable Airport Areas International Seminar in Paris-CDG: the strategies and challenges toward the construction of Sustainable Airport Areas in the world.

INTRODUCTIONS

Mathieu Montes,
1st Deputy Mayor of Tremblay-en-France, Association of the Greater Roissy Communities Representative

The association of the Greater Roissy Communities (Association des Communes du Grand Roissy) was founded 2 years ago and assembles about 30 local authorities located all around Paris-CDG. The airport is located on 3 different counties (Seine-Saint-Denis, Val d'Oise and Seine-et-Marne), which makes governance a rather complex challenge. The objectives of this association are to have shared governance and to act as one body towards the government and the economic actors which should geographically develop in a coordinated and organized way.

For a long time, the airport was considered as an island that was developing according to its own needs without taking its environment into account. It brings jobs and wealth but also nuisances. Today there is a strong ambition to work together on the interactions between cities and the airport and on the emergence of an airport area.

Some concrete positive developments include the opening of a shopping center "Aéroville" to serve the 120.000 people who work on Paris-CDG airport area and the local populations, and a contract of territorial development (linked with the coming transport network) between the French government and the cities of Roissy-en-France, Tremblay-en-France and Villepinte. Development in general should be to the benefit of local populations, this means: joint action to limit nuisances, preservation of the environment, promotion of the least polluting transportation modes, and to motivate local enterprises to embrace the concept of sustainable development.

Jean-Paul Planchou,
Vice-President, Ile-de-France Regional Council, President of Hubstart Paris Region® Association

The future of Paris-CDG -and what the territory around the airport will become- and has always been a concern; however it was never an important item on the agenda for any of the local authorities. Now this all has changed, right in time because there are great challenges ahead and Greater Roissy (or Paris CDG Airport Area) cannot fail. In spite of the economic crisis, the local economy of the Paris CDG Airport Area continues to grow. Job growth has been faster than the average of the Paris Region. The good performance
of Paris-CDG confirms this tendency. This current success is however not a guarantee for continuous growth in the future. Hubstart Paris Region® was precisely created for this, to join efforts toward the strengthening of the economic success for the long term and to increase the Paris CDG Airport Area's influence on a regional and international basis.

There is a need for 'coopetition' instead of competition: a joint project, a work-sharing program, and a collective agreement, as success never comes alone. To become sustainable as an airport area, one needs to learn from best practices, to understand the relationship between economic areas and employment areas, relations of economic sectors, and modes of transport. The Sustainable Airport Area is a concept that goes far beyond the idea that only the airport has to be sustainable; it is about a development of all the activities in the airport area that is respectful of people and of the environment.

Augustin de Romanet, President-CEO, Aéroports de Paris

This year’s seminar location, the Paris-CDG Customer Service Academy of Aéroports de Paris, was founded to trigger the dialog between subcontractors, customers, suppliers, and partners in order to improve the client experience. The Sustainable Airport Areas International Seminar deals with the relationships between the airport and the city. At the end of World War II, airports were generally located far away from cities because of the noise and pollution they created. Aircrafts have become a lot less noisy, and because of this there is a trend to bring the cities closer to the airports. As John Kasarda has explained, people have always clustered around places where flourishes economic activity. First those places were harbors. In the 19th century cities developed around train stations and in the 20th century around motorways and high-speed train stations. Now in the 21th century, cities develop around airports.

According to John Kasarda an airport has an impact on the direct related jobs in a range of 20km and on all economic activity in a range of 40km. The challenge for the creation of an airport city is thus of great importance. This seminar allows stakeholders of airports, local representatives and economic actors to discuss the further development of airports given reductions in aircraft noise. When airports continue their development, there must be a coordinated consistent development around them with attention to sufficient public infrastructure, housing, waste recycling, and renewable energy.

2012 SYNTHESIS & 2013 INTRODUCTION

& Michael Cheyne, Director, Asset Management and Sustainability, Hartsfield-Jackson Atlanta International Airport

This part briefly synthesizes last year’s seminar in Atlanta and provides guidelines for this year's edition. A Sustainable Airport Area can be defined as following:

- An airport area is the territory around an airport which economic, social, and environmental development is impacted by the airport activity. Everywhere around major airports, territories are developing rapidly, creating new activity centers, developing new economic functions, thus creating new jobs.
- The term "sustainable" in this context reflects an ambition and a will. It is the desire to develop the airport area in the long term, according to the 3 dimensions of sustainable development: economic, social and environmental.

The Sustainable Airport Area International Seminar sessions are built on 3 pillars: economic development in the long term, sustainable spatial planning and license to grow. The latter can be defined as the ability to create positive externalities, such as job creation, to compensate for the negative externalities created by the airport (related) development. The first edition of the seminar was held in Paris-CDG in November 2011. Experts from around the world gathered to exchange ideas, experiences and practical solutions under the
theme "Shaping the 21st century model for Airport Regions". Last year, it was organized in Atlanta addressed the topic of “Sustainable Airport Areas: a global metropolitan phenomenon.”

In 2012 many international experts came to Atlanta to discuss together different perspectives from a wide range of airports areas in the world. 3 key areas covered the workshop sessions: economic development, urban planning and license to grow. The workshop on economic development discussed factors for the success of airport areas. There is not just one factor but a combination of many efforts that make them a success. The “Aerotropolis” and “Airport City” models came to discussion as well as the types of activities that are applicable to an airport, the ones that are attracted or those that are needed by the airport. It has underlined the 2-way relation between the airport and the surrounding developments.

The second workshop focused on urban land planning, which can be seen as a regional effort. The airport should not be approached as a sole actor but as a bigger whole together with its surrounding communities. Discussed were issues of land-use, transportation, and social justice. Airports are usually located within multiple jurisdictions and many actors are involved, which makes planning complex but the challenge is very important to become sustainable. "If we knew 20 years ago what we know now, we may have grown differently". Let's hope that 20 years from now we would not be looking back saying "I wish we knew what we didn't know then" so that we can look back and say "This made sense."

In 2011, during the first seminar the credo that came out was "together", looking at how the airport works with local jurisdictions and the local government agencies. Last year, we extended this credo in the workshop that dealt with license to grow, in that it is not just the local jurisdictions and the airport together, but how they work with the local communities. Collaboration between all stakeholders is crucial. They all need to be involved throughout the whole governance process in order to build a relationship and even-though there are differences in vision, these differences can be discussed to come to a resolution that is good for all stakeholders. The airport should not be seen as leader but rather as facilitator in this process. It facilitates conversation and collaboration.

This year’s seminar has a pragmatic approach because it discusses the challenges and strategies toward the construction of Sustainable Airport Areas in the world. There are 2 workshops in parallel: one focusses on sustainable spatial planning strategies, in particular on how to develop strategies when it comes to airport areas that are already mature, that is when it comes to revitalization, and when it comes to developing airport areas from scratch. The other workshop has a more economic approach. It deals with new economic opportunities in airport areas and the attractiveness factors of airport areas. License to grow, the third pillar of the Sustainable Airport Areas concept is incorporated in both workshops and puts forward the issue of employment.

There are 50 speakers, of whom 25 from outside of France. This year's focus is on Asia with case studies of 5 Asian airport areas in both plenary sessions and workshops.

PLENARY SESSION PART I: SUSTAINABLE AIRPORT AREAS IN ASIA

OVERVIEW USA/ASIA

John Kasarda, Distinguished Professor & Director, Kenan Institute of Private Entreprise, University of North Carolina

Major airports and their nearby urban areas are never static, they are in a continuous process of change. Planned or not, airports and their environments are transforming from places of departure to destinations where distant travelers and locals converge to work or otherwise conduct business, exchange knowledge, shop, eat, sleep and be entertained often without going more than 15 minutes from the airport. Airport areas are quickly becoming regional and national assets as well as airport assets. Properly planned and developed they promote regional business efficiency and attract sustainable development while generating additional passengers and cargo for the airport.
The true engine for airport areas is not the airport per se but its air routes that operate as a physical Internet moving people, parts, and finished goods quickly and efficiently over long distances. Airports can be seen as routers of this physical Internet and as such have become business magnets and regional economic accelerators as the physical Internet influences route development, airport commercial development, and regional business development. The Aerotropolis is the broader airport integrated economic region with the airport city at its core. It consists of aviation-oriented businesses and associated residential complexes along connecting transportation corridors. Businesses and business people may be widely dispersed throughout the metropolitan area or are clustered at some points distant from the airport but nonetheless are highly dependent on it for time critical access to their global suppliers, customers or enterprise partners.

The Aerotropolis is an urban manifestation where the local meets the global, where many airport area businesses are more dependent on distant suppliers and customers than on those in their own region. Its value proposition rests on its aviation connectivity and corresponding ability to move people and products over long distances. The airport acts as the physical interface of the global and the local for many of today's high-value goods and business services. The most prominent of these interfaces have attracted a remarkable number of businesses to their airport areas generating huge economic returns to their regions. In the Amsterdam airport area 1000 firms, including the world headquarters of 2 banks, have located less than 10 minutes from Schiphol’s passenger terminal. Likewise 4 Fortune 500 world headquarters are located in Las Colinas-Texas only a short drive from Dallas-Fort Worth International Airport.

Research on employment around the 25 busiest US passenger airports found that 3.1 million jobs as of 2009 were located within a 2.5 mile radius of these airports (2.8% of total US employment) including 9.3% of all US employment in transportation and warehousing. Over 7.5 million jobs (6.8% of total US employment) were within a 5 mile distance and 19 million jobs (17.2% of total US employment) were within 10 miles of these 25 airports. Assessment of wages and salaries of these airports show that the respective percentages from payrolls were respectively 3.4%, 8.2% and 21.9%. These percentages indicate that many jobs near major airports are relatively well paid. When analyzing individual airports, it appeared that those located at greater distance from the city-center generated significant employment clusters of their own.

Research also revealed that traditional city center employment sectors such as finance, insurance and administration are moving to airport areas: zones within 5 miles of the airport register 55% of the total finance and insurance jobs that are located within 5 miles of the city center and 78% of the administrative and support jobs. Hotels are mushrooming around airports: the largest concentration of hotel rooms on the entire US West Coast is adjacent to Los Angeles International Airport, while there are 49 hotels within 2.5 miles from Atlanta's Hartsfield-Jackson airport. Some of the larger airport hotels have become virtual corporate headquarters hosting sales meetings, client contacts, and high-level decision making for executive and board members that fly in from across the country. Airports areas are also attracting more and more businesses in medical, life sciences and information and communication functions. Sports, recreation, entertainment complexes, showrooms, exhibition and convention centers are gravitating to them as well.

Future development of the Aerotropolis will be filled by further global integration and the need for speedy connectivity. Both will be enabled and catalyzed by the continuing expansion of aviation routes. Asian and the Middle East are investing heavily in their airports and Aerotropolis as competitive tools for 21st century global trade and commerce. Where the US targeted US$2 billion to its airports as part of a US$50 billion infrastructure stimulus plan, China plans to invest nearly US$240 billion in its aviation sector during the following 5 years, including 56 new commercial airports. India is building 20 new airports and modernizing 58 others, while the Middle East is experiencing a similar airport infrastructure boom, currently investing some US$104 billion.

Asia and the Middle East take a strategically and philosophically different view of their airports and airport areas compared to the US and Europe. While Asia and the Middle East treat their airports as primary
infrastructure assets to compete in the 21st century, the US and Europe all too often treat them as nuisances and environmental threats to be controlled. There are problems that need to be addressed with major airports and their surrounding areas, including noise, congestion, environmental, safety and capacity issues, however the critical importance of airports for 21st century competitiveness and urban prosperity must be better explained, publicized, and appreciated.

**FOCUS ON CHINA**  
**Carol Chen, Senior Manager, G&W Consulting Guangzhou Office**

The Chinese airport industry has been ‘localized’ in the early 2000s when the central government transferred the ownership of almost all airports to the local governments, except for the Beijing Capital Airport and airports in Tibet. Since then, airports have been corporatized and run as profit driving commercial entities. The ownership structure diversifies from local (provincial) government to airport group and foreign ownership. The local governments see their airports not as merely public infrastructure, but as attractive investment opportunities and driving engine of local economics. Owners of major airports try to enhance their profitability where smaller airports have to pursue self-sustainability which is getting more difficult because of increasing threshold traffic.

Therefore the concept of airport cities is often embraced in China because it implicates that airport authorities can seek for more business opportunities outside of their traditional activities. All top 30 airports already have their airport city programs in place. Some key examples: in Beijing businesses formed an airport city plan under local government guidance. Today there are several Fortune 500 companies in the airport area and the economic contribution of the airport to the region has increased remarkably in the past years. The introduction of an Airbus assembly-line in Tianjin has induced industrial clusters in the airport area some very innovative. Zhengzhou was the first airport to have an economy experimental zone, planned to receive major industries and businesses in future on 415km².

There is a growing concern among local governments, airport management and local inhabitants about the environmental impact of airport. For the new second airport of Beijing there is more attention to the issue of responsibility for the local economy and social development thanks to an integrated planning process. Another example for this is a small airport in the Yangtze River. Its integrated land use planning and strategic position and business model with intention to obtain survivability has created a new business model in China. In a context of continuous growth of air traffic, numerous airports are to be developed or expanded in China. The concept of airport sustainability in China is still profit-focused but there are comprehensive approaches to more Sustainable Airport Areas including environmental protection and social responsibilities.

**FOCUS ON SEOUL**  
**Tom Murcott, Executive Vice-President and Chief Marketing Officer, Gale International**

Korea is one of the world’s leading economies, currently ranked 12th in the world in terms of GDP. 1/3 of the world’s population or more than 60 cities of 1 million or more people are within a range of 3.5 hours by plane. Coming out of the 1997 Asian financial crisis, the country realized it had to internationalize its economy to become more competitive and less reliant on hard goods manufacturing and export driven model. In short, to thrive it would have to make the peninsula a destination for international business much like what had been accomplished in Tokyo or Hong Kong. In 2003 the Korean central government designated the first of what would become 6 Free Trade Economic Zones (FEZ), to leverage the international connectivity provided by the then recently opened Incheon airport.

Incheon airport has become widely recognized as one of the best in terms of performance, user experience and operational and retail efficiency since its opening in 2001. Currently more than 44 million passengers pass through the facility annually. With an US$4 billion expansion plan on the way, the capacity will increase
to 60 million by 2017. In 2001 the Incheon metropolitan city selected Gale International together with development partner Pasco engineering and construction to provide an integrated master plan for an ongoing development strategy for what would become Songdo International Business District. Songdo IBD is a true public private sector partnership led by the Incheon Metropolitan City government and supported by the central government. The 6,000,000m² mixed-use site is located approximately 20km from the airport. It is accessed by motorway and bridge system built specifically to connect the airport directly into the Songdo land reclamation.

Songdo IBD is now for more than 50% completed, over 13,000 residential units are occupied or under construction. An estimated US$12 billion has been invested of which US$5 billion foreign direct investment. Hundreds of small and medium enterprises have opened and provided services to the residents and international businesses that are coming to the city and surrounding area. Leading global organizations like the Green climate fund and the World Bank have recently opened and are moving their regional offices into Songdo. These institutions added to the private sector companies will bring thousands of jobs for Koreans and international knowledge workers. The United States’ Green Building Council LEED (Leadership and Energy in Environmental Design) standards are applied in the development of Songdo IBD. This accredited standard of sustainable design and development is a crucial factor to attract multinational corporations, which follow corporate social responsibility mandates, and has been a pillar of the marketing and communication programs providing a key point of differentiation with competing locations.

Innovative sustainable designed technologies are also baked into the Songdo infrastructure: there is a citywide networked pneumatic waste removal system which draws hard waste from businesses and residences into a central waste management and recycling facility. Moreover, there is a district co-generation plant that captures waste heat of electrical generation equipment to provide hot water and heat to residences and businesses in Songdo. Furthermore, a canal that runs through the central park and throughout the city uses non-potable water and is naturally refreshed each 5 days by the natural rise of the Yellow Sea. The results of all these pioneering practices of sustainable design development and operating technologies are expected to transform many other urban environments around the world creating better lives of millions while providing significant environmental impact and benefit to the planet.

FOCUS ON MUMBAI
Sanjay Khanna, Vice President, Real Estate, Mumbai International Airport

Mumbai is with 26.1 million people the most populous city in India and is estimated to become the 4th biggest urban agglomeration in the world by 2025. It is also known as the financial and entertainment capital of India boosting important financial institutions like the Bank of India, National Stock Exchange and headquarters of Indian Corporates. It is one of the world’s top 10 centers of commerce, generates about 6.2% of the country’s GDP, contributes to 10% of factory employment, around 25% of the industrial output, 33% of the income tax collection, 60% of the custom duty collection, 40% of foreign trade, and has the largest office market in the country. Because Mumbai is the country’s favorite destination for real-estate investment, it is also one of the most expensive cities in the world in terms of real estate.

In the early 2000s the central government of India decided to privatize its airports. In 2006 Mumbai airport was brought in a public private partnership company called Mumbai International Airport Limited (MIAL) whose mandate is to operate, manage and develop the airport and to turn it from an historic one into a world class airport. An US$2.17 billion new integrated terminal and cargo complex is currently under construction and will be capable of handling 40 million passengers and 1 million metric tons of cargo per year. Mumbai airport is one of the most challenging airport developments across the world, because alike the city the airport is really land-constrained. There is a very limited scope to make city site development in the Mumbai area, around the airport there are slums and there was a need for a cross round way.

An airport city was envisaged to reinforce the business hub and the financial and entertainment capital
functions of Mumbai. The GVK SkyCity concept is a city-centric master plan that includes hotels, offices, retail, a center of conference and convention, entertainment and health sector activities. It is a mixed-use real-estate development around the airport that should increase business efficiency and reduce transit times, shortage of land in the city and around the airport, featuring social infrastructure entertainment and large convention spaces. It should become an important location for multinational companies entering India that is in proximity to other parts of the city, the airport being city-centered. The vision of the project is to deliver an urban activity center with landmark architecture, well planned infrastructure urban design and landscape, a place for entertainment to meet and to spend time.

GVK SkyCity has a 2,000,000 ft² build-up area potential of various real-estate development zones with distinct themes and characteristics. For each plot, bidders will be selected to develop. The area is attractive for developers and businesses because of its proximity to the airport and good connectivity which will further improve when a new dedicated 6-lane road and metro line will become operational. Furthermore, the limited offer of quality office buildings in the surrounding area, relatively attractive rents compared to the CBD, and a transition from industrial estate towards residential, commercial and IT development and the emerging residential micro-market, make the airport city a cost-effective front office location for different types of occupiers.

**FOCUS ON TAOYUAN**

Christophe Lai, Director, Taipei Representative Office in France, Taoyuan Aerotropolis project

Taiwan is a relatively small country of 36,000km² and 23 million inhabitants but is ranked 18th in the world in terms of foreign trade and produces many important IT products (HTC, ASUS). Within a 5-hour flight range all the major markets in Asia can be reached. The Economic Cooperation Framework Agreement with China has improved the relationships between both countries and made it possible to have direct flight connections. Today there are 670 flights per week between 41 cities in China and 8 in Taiwan. Taoyuan is the gateway to Taiwan and a hub for Asia thanks to the presence of the principal international airport and harbor of the country. The airport had 27 million passengers and 1.5 million metric tons of cargo last year and the ambition is to have 60 million passengers and 5 million metric tons of cargo by 2030.

Taoyuan County is home to the largest and most extensive industrial base in the country and is therefore often coined as the Silicon Valley of Taiwan. In the immediate vicinity there are 29 industrial parks covering multiple industries including automotive manufacturers, high tech, logistics, and other service companies. Thanks to the thriving industry that is creating more business and a lot of jobs and thus attracting people, the county has the youngest population of the country with an average age of 35. Taoyuan County has an extensive transportation network consisting of recently-upgraded motorways, regular and high-speed rail networks, while electric buses and 2 new metro rail lines with 20 stations are being planned. This includes the Airport MRT that will link the airport and its future terminal 3 directly to the capital.

Given its importance as an economic hub, the local governments of Taoyuan County and city will be merged and reorganized as Taiwan’s 6th special municipality or ‘megacity’ named Taoyuan City. The special municipality status will give the city a greater autonomous budget and more control over a very ambitious project: Taoyuan Aerotropolis. Vision of the Aerotropolis project is to transform the Taoyuan area into a smart, green and resilient city that incorporates sustainable principles into the planning and the development of projects in terms of environment, society and economics. It will be Taiwan’s largest infrastructure project since 1970s and is expected to cost over US$16 billion, create 300,000 new jobs and generate economic revenue of over US$75 billion. The Aerotropolis including the airport will cover 68.5km² of which 47.9km² will be developed.

The Aerotropolis will include 5 main zones:
- Administration and finance zone will include a financial center with banks and international companies.
• Culture, creativity and science and R&D zone will be the brain of the area with business incubators, a R&D campus, a center of integrated culture & entertainment production and performance facility and commercial areas.
• Gateway zone will boast a convention center and a conference and exhibition center, theme parks, quality agricultural products exhibition & trading centers.
• Logistics zone will include an air cargo reconsolidation hub, international logistics and cargo headquarters.
• Residential zone is going to have 21 artificial lakes and public facilities.

Only high value-added, low polluting, low energy and low water consuming industries will be allowed in order to realize a better quality of life in the area.

FOCUS ON SHANGHAI
Jiewei Jiang, Deputy Director, Shanghai Free Trade Zones Administration

Pudong International Airport is the air gateway to Shanghai. It is one of the 3 largest airports in China, the 2 others being Beijing and Guangzhou. The airport covers 40km² and is located in the Pudong new area, 30km away from downtown Shanghai. 20 years ago the area was predominantly rural before the project of Pudong economic development started. The airport was one of the 10 key infrastructure projects to support the development of the area and its history is closely linked with the history of the Pudong new area's development projects. Airport construction started in 1993 and when the first runway became operational in 1999 the GDP of the Pudong new area was RMB 80 billion. By the time the 2nd runway was put into service in 2005 this was RMB 210 billion and with a third runway in 2008 RMB 315 billion. The airport has an important cargo function with 112 international cargo air routes and nearly 3 million metric tons annually.

The Pudong Airport free zone with a surface of 3.59km² (1.81km² inside and 1.78km² outside the airport) located adjacent to the 3rd runway was established in 2009. Priority sectors for the zone are: international cargo transit, procurement and distribution, international express transit, repair and test, financing leasing, warehousing, export processing, commodity exhibition and its supporting business finance insurance and agency. In the beginning of 2013 there were 230 companies including DHL, FedEx and UPS. The launch of the China Shanghai pilot free trade zone will provide a significant opportunity for the Pudong airport area as similar zones in Incheon and Dubai have proven to be successful. There are some major tasks and measures for the zone: functional transformation of government, transformation of trade development approach, opening up of the investment sectors and financial services, and improvement of regulatory supporting systems. The new pilot zone will boost the air-borne service industry, promoting its value-added service, further enhancing the operation and development of the high-end service sectors, such as international logistics, processing warehousing, and entrepot trade.

Integration is the key for the sustainable development of the Pudong airport area. The Airport will seek integration with the airport free zone and the surrounding area where in 2015 Disneyland Shanghai is planned to open. Furthermore 2 new towns, hotel areas, outlets, commerce logistics, riddance industry and the manufacturing base for aircraft of the Chinese Aircraft Corporation are currently being developed. In the meantime a 4th and a 5th runway are under construction to meet future demand. The Shanghai pilot free trade zone is to be the new benchmark for China’s reform and opening up significantly upgrading China’s economy. The airport area will take the chance to build an advanced airborne service chain for the clustering of the relevant business, regional headquarters and talents. It will strengthen its ability to leverage on the international and domestic markets to become the international shipping, finance, trade and economic center in Asia.
WORSHOP 1: SUSTAINABLE SPATIAL PLANNING STRATEGIES IN AIRPORT AREAS TO RESPOND TO NEW ECONOMIC OPPORTUNITIES: FROM CREATION TO REVITALIZATION

Mathis Güller, Architect - Urban Planner, Güller & Güller Architecture Urbanism & Fouad Awada, Deputy Director, Ile-de-France Institute for Planning and Development

Airports are great economic areas despite the crisis. The airport area can be seen as a surface of poly centralization, as opposed to car (decentralization) and trains (re-concentration). Joint-development is necessary to capitalize on airport potential, therefore it is important to go toward a more integrated synergy model “airport integration to the city”, a concept that goes beyond “airport-city”. New dilemmas due to superposition of airport growth factors and possible solutions are discussed in 3 parts:
1. Transformation and requalification strategies: dialectic between urban transformation and new development projects. It deals with the engagement into the densification and adaptation of what is already there in airport areas.
2. Another form of growth: synergies and quality of the urban development on the long-term. It looks beyond the expensive simple growth model by using better resource management in airport areas.
3. Joint implementation strategies for a Sustainable Airport Area. The last discusses cooperation to make an economic powerhouse, increase visibility and competitiveness, and reduce internal competition between projects.

PART 1: ECONOMIC & SPATIAL REVITALIZATION IN ESTABLISHED AIRPORT AREAS

FOCUS ON AMSTERDAM/ZURICH

Christian Salewski & Benedikt Boucsein, Senior Assistants and Lecturers for Urban Design, Chair of Architecture and Urban Design, ETH Zurich

An airport can be either a separated or integrated part of the city. More than half of the major European airports are situated within 15km of the city-center. There is a distribution of effects in the urban airport area that can be translated in a spatial division of the so-called Front side vs. Backyard. Attractiveness of the airport periphery decreases with aviation but land value ends up increasing, so there is a value gap between the lowest land value and the economy of the region. In the Amsterdam airport area, there is a corridor of homogenous development. In order to optimize the land use in the area, vacant office parks can be demolished, converted, replaced or densified. Landscape as framework and identity can be used as a tool to increase the attractiveness of the airport area. Different options for urban airport area revitalization include street grids, green spaces, more integration, diversity, density and place connectivity.

FOCUS ON ATLANTA

Jack Sprott, Executive Director, Fort McPherson Redevelopment Authority

There is a big gap in terms of welfare between southern Atlanta and the nearby airport. The former Fort McPherson military base, situated halfway between the airport and downtown Atlanta, linked by the metro (MARTA), can be a tool to create jobs and promote economic development in the area. Public outreach is mandatory to re-use land and to plan urban redevelopment: McPherson Planning Local Redevelopment Authority (MPLRA) is a multijurisdictional body representing the surrounding communities impacted by the closure of Fort McPherson. MPLRA planned a science park, employment center, a “live, work, learn and play” community on the 488acre site based on the principles of sustainable urbanism, meaning mixed land uses, compact design, a range of housing opportunities, walkable communities, and preservation of open space and natural beauty. The redevelopment project is an attempt to build an ‘airport community’ in Atlanta. At the same time, it responds to the strong need for a focal point where scientists can work together on the development of new products in the fast growing bioscience industry. Last, a science and technology park (FORSCOM) should foster joint R&D.
FOCUS ON WASHINGTON
Sindy Yeh, Senior Manager, Business Development, Arlington Economic Development

Crystal City is an ‘urban village’ of 4km² in Arlington County and is almost exclusively populated by high-rise apartment buildings, corporate offices, hotels, shops and restaurants. The area is surrounded on the east side by Ronald Reagan Washington National Airport and on the north side by the Pentagon, and therefore there is no more available land to expand. The US department of defense base realignment and closure decided in 2005 to vacate 3.2 million ft² of office space in over 20 buildings, accounting for 1/3 of the office space in Crystal City and 13.000 jobs. It was the starting point for physical redevelopment of the area to encourage and increase its competitive advantages. A long term planning was conducted which should result in a 50% increase of residents, 67% of jobs and 63% of mixed-use development floor space by 2050. Crystal City was originally designed for cars: there are a lot of parking spaces and a lack of pedestrian infrastructure. Furthermore, buildings are not integrated and often underutilized. The main goal is to “refill” empty spaces in the area and to move from a car oriented towards a transit oriented development.

GREATER ROISSY: AN AIRPORT AREA IN TRANSFORMATION

FOCUS ON GREATER ROISSY (PARIS CDG AIRPORT AREA)
Emmanuel de La Masselière, Urban Strategy and Quality Director, Plaine de France Local Planning and Development Authority

Greater Roissy (or Paris CDG Airport Area) is home to 600.000 people and 300.000 jobs and is experiencing rapid urbanization. The territory has created the most jobs in the Paris Region for more than a decade and has strong economic growth: it went from an airport economy to a user economy based on air transportation. There are strong environmental and social challenges and strong constraints (large areas cannot be used for housing because of the noise contours). The economic competitiveness of Greater Roissy (Paris CDG Airport Area) should be combined with sustainable urban development, 4 objectives have been set:

• Densification around train stations (Roissypole in the center of the airport, Paris-Nord Villepinte Exhibition Center)
• Renewal of existing spaces (Paris Nord 2: mixed-use offices and logistics; Garonor: logistics)
• More compact new urban projects (Triangle de Gonesse; Eco-quartier Louvres-Puiseux)
• Connecting and structuring the major amenities of the territory: rail and road systems, public transport, green spaces.

For the last, there has to be a collective vision on land and property and a joint economic development with public transport, agriculture, habitat, and ecological continuity.

Gérard Ségura, Mayor of Aulnay, Vice-President of the General Council, Seine-Saint-Denis

Paris-CDG airport is one of the only European airports that enjoys the presence of important development opportunities in its immediate proximity. The zone between Paris-Le Bourget airport and Paris-CDG is rapidly changing and there is still a lot of land (approx. 1.400ha) available for the development of urban projects and service activities. The future Grand Paris Express metro is expected to increase the development opportunities in this airport corridor. There is a major economic and real estate opportunity on the site (170ha) of a former automobile plant (PSA - Aulnay-sous-Bois), situated in close proximity to both airports and the motorway. In future, this site will be connected to the Grand Paris Express transport system. Another economic opportunity in this airport corridor is the densification of the Paris Nord 2 business park (300ha), which is home to 500 companies and 20.000 jobs. The objectives are to double its available surface area without extending the park and to redevelop the area surrounding the RER train station. On the verge of Paris-CDG airport, the project AéroliansParis is a new development zone (200ha) which should induce the creation of 15-20.000 jobs. Finally, the French-German-Spanish company Eurocopter will relocate its activities to Dugny creating a "techno-campus"of 17ha near Paris-Le Bourget.
This “techno-campus” will not only host Eurocopter’s activities but will also host other companies of the aeronautics industry creating an aeronautics cluster in close proximity to one of Europe’s most important airports, Paris-CDG.

Ilham Moustachir, Deputy Mayor, City of Gonesse

The "Triangle de Gonesse" is a project situated between Paris-Le Bourget and Paris-CDG along motorway A1, in vicinity to an important business zone. The envisaged project is a compromise between urban development and preservation of agricultural land. It should become an engine of economic development that will generate an estimated 50,000 jobs, a compact urban neighborhood that will interlink the east of Val d’Oise County and the west of Seine-Saint Denis County. The project entails Europa City, a recreational, cultural, and retail center with spectacular architecture that should attract 30 million visitors annually, a business district with R&D centers, tertiary sector businesses but also schools and residential zones. A part of the zone will remain agricultural while the other part is planned to be densely developed around a station of the future Grand Paris Express metro, making it a compact project between city and agriculture.

PART 2: CREATION OF NEW URBAN CENTRALITIES IN EMERGING AIRPORT AREAS

FOCUS ON SEOUL

Tom Murcott, Executive Vice-President and Chief Marketing Officer, Gale International

SongDo International Business District is situated 20 minutes from Incheon International airport and 45 minutes from Seoul downtown by car. The new GTX high speed commuter rail link will connect it with the capital of Korea in only 25 minutes. The development of this new city can be divided into 3 platforms:
- Commercial platform (mixed used components with retail activities)
- Residential platform
- Quality of life platform (education, international hospital, arts, entertainment and leisure center)

Education is a key attractiveness element of the area offering a university campus, schools and multi complex for all universities. For the success of SongDo IBD it is important to convince people about the worthiness of the place, it needs to become a destination, a city that will change the world.

FOCUS ON PARIS-CDG

Pierre Bourgin, Senior Vice President Business Development, ADPI

Key objectives within the Grand Paris project are to improve the movement of people and know-how. Paris-CDG is an important node in the transportation network of Grand Paris. Roissypole located at the heart of Paris-CDG is connected by motorway and train, and can be seen as an airport city and an extension of the airport corridor. It is organized in successive layers around this transport node and has both cargo and commercial development and forms an important contact point for the local inhabitants. Development used to be mainly concentrated around the RER station and is now expanding to the flanks with new hotels and a new business district. In Paris-Orly a similar project has been recently implemented called the ‘Heart of Orly’ (Cœur d’Orly) with offices, shops, and pedestrian streets with urban dimension.

KEY STRATEGIES AND INSTRUMENTS FOR PLANNING SUSTAINABLE AIRPORT AREAS

FOCUS ON LONDON

Shamal Ratnayaka, Principal Transport Planner – Aviation, City of London

The metropolitan area of London is served by 6 international airports and several smaller airports: Heathrow, Gatwick, Stansted, Luton, City, and Southend. Apart from City, all airports are located 15 miles or further away from the city center. Heathrow, London’s busiest hub, is currently operating at 99% of its runway capacity with regular disruption and delays as a consequence. Furthermore it limits new connectivity, particularly to emerging markets. The noise impacts of Airport equal more than 25% of the EU
total. A possible solution is the construction of a new 4-runway 180mppa hub airport to the east of London, away from dense urban areas, with lots of space to develop. Historically London is divided in half: factories/docks in the east and prosperity in the western side. The new airport in this area could release the economic and development potential of the Thames Gateway corridor, rebalancing the economy of the metropolitan area. The old Heathrow site could be an opportunity to address the chronic London housing shortage.

FOCUS ON BERLIN
Johanna Schlaack, Urbanist, Center for Metropolitan Studies, TU Berlin

The new Berlin-Brandenburg airport will be changing the air accessibility and with that the function on the ground will change as well. The airport can contribute to shift the imbalance between east and west. A growth triangle "Berlin inner city – Potsdam – Airport BER" is expected to lead to relocations in favor of the east. Berlin could capitalize on the experiences of other new airport areas: working communities have decided to work together to integrate development around the airport. Complex negotiations from different stakeholders resulted in several plans including the Airport Corridor of Berlin, the airport area itself, and a land-use plan. Johanna Schlaack talks about the “airea”, a tool to analyze the airport area: heterogeneous items in the area between the airport and the metropolitan region. There are different types of interaction between city and airport: isolation (Atlanta), competition between city and airport for urban development, parasitism (both attract functions and impulses from the urban region), and symbiosis (both create new functions). "Better Aireas" is a toolkit designed to qualify the airport airea through all levels of sustainability: culture, economy, society, and environment based on different criteria.

FOCUS ON EUROPE
Eirini Kasioumi, Urbanist, Chair of Architecture and Urban Design, ETH Zurich & Andreas Schmitt, Urbanist, Chair of Sustainable Urbanism, TU Munich

The Paris-CDG Airport Area has many different economic functions and a clear airport corridor. There tend to be more and more value added and knowledgeable functions that are clustered in new potential functional centralities. The future Grand Paris express network will push public actors to plan major projects together, regional coordination efforts are already undertaken. On the Frankfurt airport a former military site is converted into a hyper-dense airport city that forms a local and regional intermodal node. The airport area can be characterized by strong city governance with strong expansion planning. Regional coordination is in birth with cooperation with 3 communities affected after the expansion process. In the Munich airport area, there is only one major project going on with high densification including cargo functions and office projects. There is spontaneous corridor urbanization without regional coordination. Helsinki’s airport is significantly smaller than the before discussed airports, however it has a high level of development including an extensive airport city (Aviapolis). There are many projects in the area with diverse development mostly clustered along the motorway, out centered from the airport.

There is no common European urban development and planning model followed by the airport areas of Paris-CDG, Frankfort, Munich and Helsinki. In some areas there is an emphasis on the region but it is still a long way from spatial planning strategies. There are different metropolitan structures, transportation systems, planning regulations, and planning cultures. Airports remain an important engine for the development of the territory. There is the important challenge of an upgrade of economic functions and a better balance between logistics activities and offices parks and shops. Tertiary activities fall into the heart of airport platforms and are of larger size. New urban development projects are looking for more compactness, higher density, better connectivity by public transport, and better accessibility. One of the essential components of sustainable spatial planning is the mixing of functions. On the airport platforms and in the corridor there are difficulties in implementing this mix because of the nuisances. To share the positive externalities with the local inhabitant it is crucial to work together.
WORKSHOP 2: ECONOMIC OPPORTUNITIES IN AIRPORT AREAS: NEW ECONOMIC SECTORS AND ATTRACTIVENESS FACTORS

Jean-François Benon, Managing Director, Val d’Oise Economic Expansion Committee & Pierre Vidailhet, Real Estate Research & Development, Aéroports de Paris

Workshop 2 deals with the economic opportunities for airport areas and in particular with their attractiveness factors and the phenomenon of new economic sectors. Presentations of concrete cases and discussions in this workshop helped to address the following 2 key points:

1. Strategies of the stakeholders of airport areas to attract international companies and new economic sectors / activities (through: marketing, land and real-estate offer, free trade zones, incentives, employee services), and to take advantage for the sustainable development of their territory (employment, training / education, fiscal resources)

2. Identification of in particular new economic sectors related to the economy of airport areas (business tourism and trade shows, logistics with high added value, biotech’s, universities and training centers, shopping malls and leisure centers, international headquarters, medical tourism) and key factors for businesses to (re)locate themselves on airport areas.

The first part of the plenary session has dealt with Asian case studies. The first part of this workshop elaborates on several of these cases.

PART 1: SHAPING THE ECONOMIC DEVELOPMENT OF AIRPORT AREAS

FOCUS ON CHINA

Carole Chen, Senior Manager, G&W Consulting Guangzhou Office

The development of airport areas in China can be divided into 2 levels:

- National level, with 3 areas (Beijing, Tianjin, & Shanghai), where policy falls under central government.
- Regional level, including all the other big airports, where policy falls under local councils that drive economic and urban development of the airport area.

Policies are generally focused on real estate programs, and other means to implement economic development (i.e. Free Trade Zones). They are either associated to aviation-related functions (logistics, aircraft maintenance, hotels etc.), supported by an established industry, the result of national policies (i.e. COMAC aircraft), or non-aviation related functions such as convention centers and amusement parks (Disney Shanghai).

FOCUS ON SEOUL

Tom Murcott, Executive Vice-President and Chief Marketing Officer, Gale International

The place where Songdo IBD is situated today was until 2000 a greenfield-site without any activity. Gale International was selected by the Korean government to develop from scratch Incheon Business District, a CBD for the Incheon Free Economic Zone, located 7 miles from Incheon Airport. Gale has prospected to attract international investors to bring in companies (i.e. CISCO), including ICT companies and bio techs, but also schools and universities. The World Bank, and the Green climate Fund, an organization dependent on UN funding with actions related to climate change, have recently opened their offices in Songdo. The approach of Gale Internationals’ Aerotropolis development in Incheon could be transposed to other airport areas in the world such as Shanghai.
FOCUS ON TAOYUAN
Christophe Lai, Director, Taipei Representative Office in France

Taoyuan County in Taiwan seeks to attract investors to develop a Sustainable Airport Area (Taoyuan Aerotropolis) with businesses that contribute through their activities with respect for the environment. Prospected business activities include cloud computing (politically and economically stable country where you can store data), green technologies (transportation, electric buses, offshore wind farms etc.) and logistics (synergy with the port). Taoyuan Aerotropolis advertises its territory through the promotion of 5 clusters: culture, climate, super data, clean tech and high tech. Furthermore it considers developing retail and leisure activities (duty free offer for Chinese tourists). The Aerotropolis project is ambitious in terms of infrastructure development that takes into account the airport environment and its inhabitants.

These 3 first presentations show the vast development of airport areas in Asia, having characteristics in common, that are in line with the presentation of John D. Kasarda on the Aerotropolis phenomenon in Asia:
• Development based on massive investments in infrastructure (Songdo from scratch with bridge connection to the airport, MRT lines in Taoyuan)
• Greenfield sites or sites with a very large free land availability
• Simple governance systems (partnership airport/local government in China, Taoyuan County, assignment of the creation of Songdo to Gale International)
• Establishment of all possible sectors: ‘classics’ (logistics, hotels, etc.), business tourism, exploitation and development of all resources of the local economy

FOCUS ON MUMBAI
Sanjay Khanna, Vice President, Real Estate, Mumbai International Airport

The case of Mumbai is quite different from the previous cases. The airport is inserted in a dense urban fabric with very limited land availability, surrounded by slums. With 2 intersecting runways (equals capacity of 1) the future development of the airport is highly constraint and a new airport is envisaged Navi Mumbai. The airport city project has accurately analyzed functions that are missing in the Mumbai airport area. It currently proposes these missing functions in a joint development program that includes a large convention center, hotels, and upscale offices, focused on companies but also functions that are more targeted to the local population including medium range hotels, hospitals, services to residents and shops/businesses.

FOCUS ON ATLANTA
Kevin Johnson, Senior Advisor for Economic Development, Invest Atlanta, City of Atlanta Representative & Jonathan Tuley, Principal Planner, Atlanta Regional Commission

Atlanta has been very successful at attracting international companies, one of the pull factors being its favorable tax climate. Most of these companies have decided to locate their offices at the north side of the city, while the airport is located in the south. With the exception of Delta Airlines and Porsche, who have their HQs adjacent to the airport, the area between the airport and downtown Atlanta remains a relatively undeveloped area with a predominant low-income, low-wealth population. However an answer to this social injustice is on its way: development opportunities of new clusters exist along the corridor between the airport and the city. The state of Georgia has decided to promote this potential development through tax incentives, conditions are that it has to be sustainable and in consultation with local communities. There is an issue of governance in the airport area and the recent creation of the Atlanta Aerotropolis Alliance brings key stakeholders (airport, municipalities, counties, and companies) together. They have a shared objective: to develop a Sustainable Airport Area, optimizing the economic and social impact of the airport. The Atlanta Aerotropolis Alliance, similarly to Hubstart Paris Region®, is the spokesperson and the promotion tool of the airport area.
FOCUS ON WASHINGTON
Aimee Long Vosper, Director, Northern Virginia Regional Commission

The Dulles airport area is prosperous and its local economy is supported by 2 major assets:

- Nearby presence of the Pentagon, that fuels defense and security-related activities
- Large concentration of Data Centers

High tech companies are located along a corridor that connects Dulles airport with the US capital and is therefore often used as an example of an airport corridor. To reinforce the economic development in the airport area, the state of North Virginia is building a new metro-line (Silver Line) that will serve the airport and its corridor. Around the new stations, new business should arise. Concerning governance, there is a strong desire to gather key stakeholders who are currently dispersed by territorial division, to share and to converge their strategic plans, and to create a unifying umbrella organization.

FOCUS ON GREATER ROISSY (PARIS CDG AIRPORT AREA)
Marc Gentilhomme, General Service Director, Terres de France Agglomeration Community

CDT (territorial development contracts) is an efficient tool as a way to build a shared sustainable vision of the Paris CDG Airport Area between the different stakeholders. This vision allows ensuring private investors and promotes the attractiveness of the territory for companies. The CDT also helps to direct economic development to business tourism. The international promotion relies on approaches such as Hubstart Paris Region® or Aerotropolis Europe.

FOCUS ON AMSTERDAM
Peter Joustra, Project Manager, Schiphol Area Development Company
& Michel van Wijk, Researcher, TU Delft / University of Amsterdam

SADC (Schiphol Airport Development Company) is an organization that can be seen a tool for planning and economic development of the area around Schiphol airport. It has identified several thematic clusters that are included in the spatial-economic planning, such as logistics, perishable goods, fashion, media, tourism, finance, and ICT. Market activities (i.e. logistics and perishable goods) tend to be located closer to the airport while non-market activities (i.e. tourism and media) are moving closer to the city of Amsterdam. SADC currently develops an international marketing “I Amsterdam” strategy. It wants to develop a green cluster with an ambition to host ‘the more sustainable business park’.

The development of airport areas in North America and Europe is clearly different from the upcoming economies in Asia: there is limited space to expand because large parts have already been built, much more restricted infrastructures since the airports are generally older, and more complex administrative organizations and multiple actors that are involved in the governance system. These stakeholders have a common need which is gathering and putting the different development strategies in synergy. Key factors for a successful governance system are:

- Define a clear ambition/vision
- Infrastructure as growth generator
- Integrated approach: consider both development and profitability
- Seize opportunities

The first part of this workshop gave insight into the strategies of airport areas to attract businesses and specific economic sectors (traditional and innovative). To bring further insight into new economic sectors/functions, innovative economic activities that develop around airports, the second part focuses on business and real estate developer case studies:

- Global location decision strategies of different sectors
- Motivations for the choice of location on a(n) airport area: benefits of location on airport areas
• Involvement in the development of a Sustainable Airport Area: links with other actors (i.e. through stakeholder networks), environmental actions implemented, and actions to enhance the access to employment for local people.

---

**PART 2: SHAPING THE ECONOMIC DEVELOPMENT OF AIRPORT AREAS**

**AIR FRANCE**
Sophie Virapin, **Vice President, Environment and Sustainable Development**

Paris-CDG is crucial to Air France (hub with 243 destinations worldwide). At the same time the national airline of France fuels the regional economy:
• First employer of the Paris Region (44.000 employees + subcontractors)
• Brings business to many small companies (€2 billion purchase in the Paris Region, including sustainable innovation i.e. lighter seats, reusable headsets)

Air France is committed to work with local actors, either through the use of subcontractors in the region or through policies developed for the accession of local youth to vocational training.

---

**PROLOGIS**
Antoine Beraldi, **VP Head of Property management southern Europe**

Prologis, leading owner, operator and developer of logistics platforms, has a customer-oriented approach to anticipate and meet the demand of its international clients who often want to be located at global airport hubs. One of the advantages associated with a hub is that international markets are growing faster than the national growth. The evolution of logistics near airports tends towards smaller buildings (messaging activity) where there is less storage space in order also to respond to security problems of goods (not to stop valuable goods).

---

**JONES LANG LASALLE**
Kevin Wayer, **Co-President, Public Institutions**

Pagi, the American unit of the international real estate council of Jones Lang LaSalle, is specialized in harbor and airport area consultancy. It analyzed different types of logistics real estate which develop around major cargo airports, depending on the type of cargo they handle: buildings that are located further away from the airport in the case of a freight express hub and buildings closer to the airport in the case of general hub. On basis of this analysis it designed a system of classification of airports. Paris-CDG enjoys several advantages for logistics real-estate: significant land reserves, an exceptional location, and a freight express hub (FedEx) on the same airport and a powerful general cargo hub. These favorable conditions do not exist on any US airport.

---

**EUROPEAN BUSINESS AVIATION ASSOCIATION**
Olivier de l’Estoile, **Honorary President, European Business Aviation Association France**

Aircraft maintenance and the aviation business sector are among other activities typically to be found on international airport hubs. Business aviation is of great importance for Greater Roissy (Paris CDG Airport Area). Paris-Le Bourget is the 1st business airport in Europe and participates in the creation of an aerospace cluster where there will be operators, fixed base operators, maintenance, support activities and training centers.
AEROPORTS DE PARIS
Hubert Fontanel, Real Estate Deputy Director

The entire office park of Paris-CDG is occupied by companies whose activity is linked to the airport sector. This does not necessarily mean the employees of these companies need to fly frequently. Studies show that real estate customers generally seek for 3 things: security, connectivity and urbanity. These are qualities found in airport location, both for the cargo logistics sector and for the office sector.

MORI SEIKI
Eric Gouinguenet, Managing Director

In addition to the traditional sectors, the workshop was an opportunity to discuss more diverse and innovative business activities. Japanese machine tool builder Mori Seiki decided to leave Stuttgart for Paris-CDG in 2002, as part of its international development strategy. The goal was to be located within 10 minutes from the airport in order to facilitate the reception of their international clients and their commercial personal movements.

VOLKSWAGEN GROUP FRANCE
Bruno Comyn, Head of CRS Department & Communication

The location decision for Volkswagen for setting up its office on Paris-CDG was made because of the proximity of the current site with its historical location in Villers-Coteret, to be closer to the catchment of the Paris Region, and the amenities of the place: a center for the employees and a reduction in travel time. By reducing travels and building a HQE-certified office the group attempts to fulfill its objectives concerning sustainable development (CSR).

UNIBAIL-RODAMCO
Eric Houviez, Program Director

Unibail-Rodamco wanted to create a commercial and services area for the airport employees, the local residents, and for transfer passengers with a long layover. It recently opened "Aéroville", a commercial center with a catchment area of 1.8 million inhabitants. Aéroville contributes to the creation of a Sustainable Airport Area of the Paris CDG Airport Area because it contributes to its urbanity, moreover it provides jobs for the young local population. More than 80% of the employees in Aéroville live in the immediate vicinity.

EUROPA CITY (IMMOCHAN)
Lilian Cadet, Development Director

Europa City is a good example of an innovative project in an airport area. Its concept consists in a modular and mutable city center. The ambition is to attract 30 million visitors annually of which 5 million international tourists thanks to the proximity of Paris-CDG. The originality of this project also relies on the willingness to locate near an existing transport corridor, rather than creating a new destination from scratch. As part of the airport area Europa City has launched local community consultation on the project, and collaborates with local government and local stakeholders.
It is important to work on the attractiveness of new economic sectors while not forgetting about the existing businesses. This is to give them the means to achieve sustainable development. "Grand Roissy Economique" can provide solutions in this.

Hartsfield Jackson Atlanta International Airport is owned and operated by the city of Atlanta. It is an enterprise fund, meaning that money raised by the airport has to stay within the airport. On the other side no money from the city goes into the airport. The airport is self-sustained through revenue and concessions, parking accounting for the biggest revenue. More than 95 million passengers passed through the airport in 2012, 10 million of those were international travelers. 2/3 of the passengers never leave the terminal as they are connecting to another flight. There are nearly 1 million aircraft operations per year spread over 5 different runways, while the possibility of a 6th is being studied. This is a big challenge as the airport is land constraint: with a total of 4.700 acres it is much smaller than for example Denver airport that has a surface of 15.000 acres.

The airport is expected to grow to 100 million passengers by 2015. With a growth restriction of 130 million passengers, the airport will continue to serve as a key player for Atlanta and the southeast of the US. Atlanta has always been an important transportation hub thanks to its strategic location: 40% of all US manufacturing is located within a range of 500 miles. The success of the airport is partly due to the lack of another major airport in the region. People and businesses, including Fortune 500 companies are moving to Atlanta because of the airport. There has been a recent growth in the automobile and movie industry. Porsche has decided to build its headquarters for North America next to the airport on a brownfield zone, while Kia motors built its plant on the south of the airport and more manufacturing is on the way.

The Atlanta airport generates 58.000 direct jobs, making it the biggest employer in the state of Georgia. An estimated 400.000 people are indirectly associated with the airport operation. Apart from the metro line that goes into the airport, there is no system of public transportation connecting the airport with the cities around it, a serious problem for those working at the airport. Furthermore there is a difference between the spatial distributions of people that work and people that use the airport. The north of Atlanta that boasts most of the important enterprises delivers the biggest share of local passengers. A project to promote the use of the metro could be to install a remote terminal in the north where people could already check in.

There are 6 cities in 2 counties that cover the boundaries of the Atlanta airport making regional planning in the area rather difficult. The regional commission is the regional planning organization for the Atlanta airport area. Recently it formed an airport area task-force called Aerotropolis, representing all stakeholders acting. It acts as one organization, one area that works together on the planning associated with the development around the airport. A working group including local government staff, officials, and elected politicians gets together periodically. The idea behind these meetings is not only to discuss the Aerotropolis project but also to gain mutual trust.

The Atlanta airport area is currently implementing 3 Community Improvement Districts (CID). Every jurisdiction around the airport will be part of a CID and each will have its own goals and benefits for economic development. The businesses in the districts tax themselves to create funds for community improvement. At the same time the area is implementing the first airport ecol district. The ecol district is a
concept from Portland, Oregon, and has as goal to integrate objectives of sustainable development in urban planning to reduce the ecological footprint. The vision for the airport area is that all actors will have the same energy efficiency and emission reduction rather than multiple individual plans.

**FOCUS ON WASHINGTON DC**

Aimee Long Vosper, Director of Planning & Environmental Services, Northern Virginia Regional Commission

The Northern Virginia Regional Commission represents 14 jurisdictions right outside of the Washington DC area and is made up of elected officials, Mayors and Chairs. The Dulles airport region is home to 2.6 million people of the 5 million in the metro DC area and can be seen as the economic driver of the Tri-State national capital region and the gateway to the nation's capital. There are 5 of the top 12 US wealthiest counties in the region. Loudoun country is even the number 1. The so-called Dulles corridor boasts specialized industries such as technology information systems - half of the world's Internet traffic flows through data centers in Loudoun County - defense electronics, cyber security, R&D centers and federal facilities. There are more PhD's in the region than Silicon Valley.

The Washington DC market is served by 3 airports with each its own clientele: Ronald Reagan Washington National Airport, Baltimore-Washington International Airport Thurgood Marshall, and Washington Dulles International Airport. Dulles is the busiest in the metropolitan area with 24 million passengers and is accounting for 67% of the region’s international passengers with 10 million. The airport’s surface is about 11,000 acres so there is a lot of potential for future growth. Construction is now underway to connect the airport to Washington via the Silver Line of the Washington Metro. This connection is expected to be operational in 2018 and should bring economic development to the area as road traffic congestion is currently limiting the airport connection and development of the specialized industries.

In order to preserve its landscape Loudoun County decided to move toward a transit oriented development. It focuses on the global promotion of innovation knowledge-based jobs centers and tries to improve land use transportation and energy sustainability. The Northern Virginia Regional is maximizing the Dulles region with regional planning. The ambition is to build a tri-vision plan together with the airport, Loudoun and Fairfax County to encourage the economic vitality and boost job creation and broaden the base of the economy in the region. There are a lot of challenges including mobility, economic, social and environmental aspects. Strategies among localities and the airport need to be harmonized. The first step in this is to have everyone in one room, next step will be a workshop to discuss their challenges, outreach to the business community, and the third will be a seminar.

**FOCUS ON AMSTERDAM**

Maurits Schaafsma, Senior Urban Planner, Schiphol Group

Cities can be seen as drivers of the economy and society. Many are used to a Europe-centric vision on the world. However, in all the predictions about the future of aviation, airports and cities the position of Europe is changing. By 2030 the biggest cities in the world will be less and less in Europe. This shift means the focus in Europe will be less on quantitative growth but more on quality because European cities stand out in quality of life and their historical backgrounds. In order to have a sustainable development, one should play on all success factors of the airport: connectivity and inter-modality both on the airside and landside. Public support and license to grow are key to develop both elements. On a strategic level connectivity can be translated into the economic synergy between the airport and the region. There needs to be a governance strategy on the local, regional and sometimes even international level for an effective synergy. On an operational level connectivity and inter-modality can be translated into quality and value creation of the airport area to take advantage of the interaction between companies and people.

Schiphol is number 2 in Europe in terms of international connections, with 330 destinations served
worldwide. It wants to be leader in connectivity and hub function. Airline alliances tend to concentrate their traffic on only 2 hub airports in Europe. In order to maintain its position as European hub Schiphol works on increasing the quality and capacity of the airport. It is currently preparing new investments into terminal buildings: 2 additional piers are necessary in the short term to be able to handle the annual growth of 3-5%. For the long term, a new terminal area and train station are needed. Schiphol has become a land-site intermodal note in itself: people are changing from train to train and from train to bus. The airport has direct connections to all major cities in the Netherlands by train and Brussels and Paris with high-speed train service.

Noise regulation is one of the factors that determines the quality and capacity of the runway system. Schiphol recently finished a 3-year negotiation process between airlines, airports, national, regional and local governments and local communities, with as outcome the airport is allowed to grow until 2020 under the condition that it stays within the noise limitations and specializes further as hub airport, meaning that leisure and some of the low-cost traffic should be diverted to regional airports. Another way to work on the public support for the airport is to work on all kind of issues of sustainability. For that it created a platform with universities and companies to work on solutions for a Sustainable Airport Area.

There has been a strong hub-related regional governance from the 1980s that developed an economic synergy between the airport and the seaport of Rotterdam and the metropolitan region. Vision is that both hubs are not standing on their own but they are part of an urban area that is in competition with cities worldwide. Instead of focusing on airport growth, the main goal should be to reinforce the competitive position of the Amsterdam region. Quality and value creation thanks to Schiphol's airport-city concept also started in the 1980s, to be able to invest in big infrastructure improvement including new terminals, piers, and a control tower. Land-side development with commercial buildings derived from the vision to be a meeting place. A client should be able to walk directly from its plane to its office or hotel. Schiphol created a long term model to optimize the airport as a place of interaction between people and companies. As a result it is now in the top level of office rent in the Netherlands and creates a specific urbanity including a real urban square.

Part of this value creation is the physical integration of the airport in the metropolitan region, the main emphasis in this is the airport corridor: the corridor between the Amsterdam business district and Schiphol center. The southern part of the corridor is the logistic area, and the northern part the new Amsterdam CBD, only 7 minutes away from the airport by train. Schiphol works together to develop a new railway station to make it like an external terminal of the airport. The ring motorway will be put in a tunnel and a new metro line will connect the area directly with the city center. The development of this new CBD in the south of the city will change the whole structure of the Amsterdam making it more airport-oriented.

**FOCUS ON GREATER ROISSY (PARIS CDG AIRPORT AREA)**

Damien Robert, General Director, Plaine de France Local Development Authority & Elisabeth Le Masson, Delegate for Sustainable Development Paris-Charles de Gaulle & Paris-Le Bourget, Aéroports de Paris, Hubstart Paris Region® Representative

Greater Roissy (or Paris CDG Airport Area) is the territory in the northeast of the Paris Region located around 2 of Europe’s leading airports: Paris-CDG ranking 7th in the world in terms of passengers and 1st in Europe in terms of international connections, and Paris-Le Bourget, leader in Europe for business aviation. Both airports have a crucial impact on the social, economic, and environmental development of the territory which has 600,000 inhabitants and nearly 300,000 jobs. The Paris CDG Airport Area can be seen as an economic engine for regional and national development, with 15% of the jobs created in the Paris Region while it accounts for only 5% of its population.

There are 3 major development challenges for the Paris CDG Airport Area: First, to reinforce the function of the airports as engine for economic development. There are 700 companies, 90,000 direct jobs, 250,000
induced jobs and €22 billion in added value. New businesses are moving to the area attracted by its connectivity. The second challenge is to strengthen the metropolitan function of Paris CDG Airport Area, that of a major cluster in the Paris Region, dedicated to international trade that is complementary to the other clusters in the metropolitan area. The last challenge is strengthen the synergy between the airport and the metropolitan area. Airport development is a great asset provided that this development creates value to the airport area that it is beneficial to its inhabitants.

Paris-CDG handles around 62mppa and still has significant capacity for future growth. It invests heavily in the quality of service to get older terminals up to date, while the cargo area is being restructured. Next to Paris-Le Bourget a techno cluster will be developed. 25 economic projects were identified in Paris CDG Airport Area that should create 130,000 new jobs by 2030. There is a dual tendency: diversification and upgrading of the local economy thanks to the arrival of new economic functions and sectors related to connectivity, and a growth of traditional airport and aviation related functions. In the Paris CDG Airport Area there are 3 new sectors:

- Business and corporate sector, including diversified and complementary offices (Roissypole, AéroliansParis, Paris-Nord 2, Roissyparc International, Triangle de Gonesse) and show-room facilities (AéroliansParis, Apark);
- Sector of business events and meetings including exhibition, congress and seminar locations (Paris-Nord Villepinte Exhibition Center, International Trade Center Paris);
- Tourism and recreation sector, including a shopping center (Aéroville), a recreational, cultural and commercial complex (EuropaCity) and multipurpose spaces (Arena Dome, Coliseum).

Paris-CDG was established in the middle of the fields in the 1970s, little by little the metropolis has developed requiring a new model of spatial organization for the airport area, with more functional and social diversity. There has been a vast economic development induced by the airport that has been rather spontaneous so a challenge is to optimize the spatial organization of the economic development for the long-term. A second challenge is to rebalance the link between living and business activities and develop a residential attractiveness in the airport area. Furthermore the accessibility of the airport area has to be improved and sustainable mobility promoted. Last, the agricultural and natural areas should be more considered as richness to share, the value of the farmland around the airport should be promoted and given an economic function.

An important challenge for the creation of a Sustainable Airport Area is to have a shared development that benefits everyone. Currently there is a mismatch between the skills of the local inhabitants and the future jobs in Paris CDG Airport Area, therefore they need to have trainings, a tool for this is "GIP employ". To enhance the quality of life in the airport area an important challenge is to limit the nuisances of the airport as much as possible. For several years now the involved actors have been applying the 'Balanced Approach' (European Commission) which includes measures for soundproofing, prohibiting noisy airplanes, limiting the hours of landings and takeoffs, different ways of landing, prices related to the noise made, and penalties for non-abeyance of those measures. To reduce the ecological footprint of the area the new buildings built are often green building (HQE). On the airport platform a biomass station was constructed which supplies about 25% of the heating in the airport, while solar panels are currently being installed.

One of the biggest challenges for the Paris CDG Airport Area is to have a collective governance system to engage all stakeholders on both local and metropolitan scale. The area counts more than 50 involved public authorities and hundreds of commercial enterprises. A Territorial Conference brings together all these private and public players once a year to trigger the dialog between them. Furthermore, there is an Association of elected representatives (ACGR), an Association of chambers of commerce and economic actors (Grand Roissy Economique) and dedicated tools for the international promotion of the area: Hubstart Paris Region® represents 30 players in Greater Roissy (or Paris CDG Airport Area) and has about 30 collective actions per year. It promotes the Paris CDG Airport Area in international conferences, it seeks prospects, welcomes foreign delegations, has cooperation agreements with other airport areas like Shanghai Pudong and Atlanta and it organizes the yearly Sustainable Airport Areas Seminars.
Cities have always been sustainable in that they can survive. Cities are alive and therefore they are fatal, as recently observed in the US with the cases of Detroit and 'Rust Belt' cities. If cities want to continue to live, it is necessary that they know how to manage their mutability and competitiveness. A sustainable city is competitive economically, socially and environmentally. John Kasarda recalled this concept of competitiveness and mutability of cities by explaining that cities are created around ports, train stations, motorways and tomorrow around airports. It is more complicated than this: ports often produced cities however not all cities have ports. Cities with ports have always been moving away from them because they became places of nuisances. Train stations were originally outside of the city, as for the case of Paris. Gradually the city grew to the stations and the stations thus created urban spaces. The question is whether airports will be the new ports that will try to make cities around them or whether they will be train stations that will actually be places of urban creation.

Accessibility and external economies of agglomeration are crucial functions of the city. The European urban development models differ from the Asian and American examples that have been presented during this seminar. It is not desirable to go towards an urban model of functional cities with dedicated spaces linked by high-speed transports around airports. On the other hand, the issue of the external economies of urbanization is very important. It means to create the city in relationship to human services, to allow people to have urban living conditions near their work place, such as shops, restaurants, parks and swimming pools. The multifunctional city increases the productivity of people which is essential for companies. Free trade zones are not always proven to be successful in attracting companies because they lack urbanity. The tax advantage is thus less important than the urban services a city has to offer. The new cities built near airport are often gated communities separated from the rest of the city and therefore not desirable.

It is not desirable to have cities that are active during the day, or cities that are solely exclusive. Mumbai airport is surrounded by slums, even though the airport city implemented there is not perfect, the airport can help diminishing this social exclusion. This issue of inclusive competitiveness is an important challenge for airport areas worldwide. We need to find a way to make the unemployed themselves become creators of value in the territory. Planning should be done on a neighborhood level. Pre-designing an entire city is not sustainable as we cannot foresee now what will be relevant in 50 years from now. Re-urbanization of an area should be done gradually by iterative stages as in the case of Crystal City, so that the city can make itself up gradually. City development should be therefore threated as an urban process and not an urban object that is not sustainable per definition.

The greatest metropolises of the world that used to be Paris, London or New York are nowadays in Asia or South America. However the megalopolis, this virtual object that links Paris, London, Randstad and the Ruhr region is the biggest in the world, the wealthiest, and the one with the most high-level transport infrastructure, the Chunnel, and major harbors including Rotterdam. In Europe there are all the ingredients to have a competitive megalopolis. It is an important future objective to cooperate between cities Europe and to find the ways to be complementary. This process of cooperation has already started with the strong relations between airports such as Paris, Amsterdam and London. Airport areas could in this situation become real cities as train stations but in a more megalopolitan way.
CONCLUSIONS – ROUND TABLE
Jean-Claude Detilleux, President, Paris Region Economic Development Agency

The phenomenon of economic activities around every major airport as described by John Kasarda can easily be observed while taking off by plane from these airports. This economic development induced by airports is related to globalization, meaning that those airports have an important network effect on the businesses that are increasingly globalized. It can be illustrated through 2 examples discussed during this seminar: the first is Kasarda’s research on the 25 largest US airports that shows the amount of jobs in and around these airports equals that of the CBD’s. Second, there are 270.000 to 300.000 estimated induced jobs thanks to the presence of Paris-CDG and this number will continue to grow, making it the largest job development center in the Paris Region and France.

New in this third edition of the Sustainable Airport Areas International Seminar is the focus on upcoming airport areas in Asia. There is a strong growth in air traffic and there is a strong determination to build world class airports, as the quality of services is essential for the airport and thus the entire airport area to be the engine for economic development. The diversification of economic activities around the airport allows the airport area to develop. Taoyuan and Songdo are good examples of airport areas with a remarkable autonomous development. They are the evidence a new city, and a diversified economy can be created from scratch that can compete in the world economy. Free trade zones in Incheon, Dubai, and Shanghai are another important example of a tool to attract international companies. For the redevelopment of existing airports accessibility and governance are key elements.

Frédéric Vernhes, President, Val d’Oise Chamber of Commerce and Industry, « Grand Roissy Economique » Chambers of Commerce and Industry Representative

The airport is a place of exchange, transit, a logistics activity and a local economic specialization. The logistical specialization can support diversification of the local economy. A pharmaceutical company for instance that is located next to an airport can send its analyses the next day everywhere in the world. The growing importance of e-business relies on physical exchanges provided by airports that are highly accessible and multimodal. Companies are not enough involved in the planning of the Paris CDG Airport Area and the ambition of the airport area is not strong enough. Companies in the areas are often organized in corporate network and these networks should be addressed more often in the governance process in order to improve the attractiveness of the territory.

François Scellier, Vice-President, Airport Regions Conference, Member of French Parliament, 1st Vice-Chairman, General Council of Val d’Oise

The Airport Regions Conference (ARC) is an association of European regional and local authorities with an airport situated within or near its territory. Most of these areas are densely populated. The role of the ARC is to analyze shared problems and to try to find solutions within an European framework, in other words to balance the economic benefits generated by the airports against their environmental impact, notably the effect on the quality of life of local residents. The different members share their experiences in live meetings. At the same time the global competitiveness is an important issue. Therefore for instance a vision was created for Grand Paris but as Franck Vallerugo mentioned, further scale enlargement may be desirable for the future in order to be able to compete with the rest of the world.

Didier Hamon, General Secretary, Aéroports de Paris

In France both the current economic situation and the perspectives for the future do not look good. One could say that the country is aging from an economic point of view. However, there is an opportunity to reinvigorate the economy by hooking up with the flourishing industries and economic sectors including air
transportation. All markets could benefit locally if they take the right decision by securing local
development in global development. To organize this there is a need for governance, local authorities and
private local players organize themselves to work together at developing the region. The answer for the
difficult situation of today is to locally find concrete ways to re-industrialize and re-economize the country.
A good example for this is the case of Aulnay, where they are currently trying to attract biotech's and other
high value companies to replace the loss of jobs due to the closing down of a major automobile plant (PSA -
Aulnay-sous-Bois).

Bernard Corneille, General councillor of Seine-et-Marne, delegate for Greater Roissy

The Seine-et-Marne County covers more than half of Paris-CDG’s territory with 4 jurisdictions: Le Mesnil-
Amelot, Mauregard, Mitry-Mory and Compans. There is a great potential for future development around
the airport that was overlooked since its opening in 1974. The geographic location, Seine-et-Marne is
situated north of the airport, while the airport was turned towards Paris, and a lack of interest from the
elected representatives were the main reasons for neglecting the airport in the past. Seine-et-Marne can be
seen as the backyard of the airport characterized by a landscape of predominantly natural and agricultural
areas. It could become a sustainable showcase of the airport area where economic activities and the
environment live side-by-side. Seine-et-Marne has taken measures to improve mobility with the creation of
a new on-demand bus system named "Filéo", which allows residents of the area who work on the airport to
be within easy reach of their workplace 24/7.

Gérard Ségura, Vice-President of the General Council, Seine-Saint-Denis

In Greater Roissy (or Paris CDG Airport Area) there are 3 counties with different characteristics: Seine-et-
Marne is mostly agricultural, Val-d'Oise is halfway between agriculture and urban lands, and Seine-Saint-
Denis covers an extremely dense urban area. There is generally very little space available and densification
is often the only solution to continue the economic development of the area. 170ha have become available
due to the closing of the PSA Citroën automobile plant in Aulnay-sous-Bois. Even though the counties are
quite different, they still share common problems but also objectives. In order to create a Sustainable
Airport Area, the neighbouring counties need to integrate their different visions and overcome issues of
governance. An agglo-metropolis from Paris-Le Bourget to Paris-CDG is under construction. It can be seen as
an airport corridor or a butterfly if the east and west sides of the airport are added to the corridor including
cities of Sarcelles, Gonesse, and Clichy-Montfermeil which have an economic potential but whose tax
potential is low. Partly thanks to the success of Hubstart Paris Region®, that unite different stakeholders in
the Paris CDG Airport Area, the decision makers start to look beyond their administrative borders.

Michel Montaldo, Vice-President of the General Council, Val d'Oise

There is a mismatch between the education of local inhabitants and the new emerging sectors. Some of the
areas around Paris-CDG belong to the poorest in the country with huge unemployment. To be extra careful
with the signal towards the people is very important in the development of a Sustainable Airport Area.
There is a huge potential for job creation in the area. It is very important that the area give a positive image
to the people who live around, in particular to give them hope of the ability to climb the social ladder.
Without providing this positive picture the risk is a strong rejection from the people toward future airport
and airport-related development. With the planning of airport cities, that are often association with an
image of luxury, it should be taken into account they are accessible to the local populations.
Thanks

Warmly thanks to all of the speakers and especially foreign speakers from Europe, Asia and The United States. Thanks to the sponsors of the seminar: Aéroports de Paris, the Paris Region Economic Development Agency, the counties of Val-d’Oise, Seine-et-Marne and Seine-Saint-Denis, the Chamber of Commerce and Industry of Seine-et-Marne and the Community Terres de France. Thanks to the Hubstart Paris Region® team and the members of the Sustainable Airport Areas Commission.

See you in 2014 for the 4th edition of the Sustainable Airport Areas International Seminar in a place to be announced.

This report can be downloaded on the Hubstart Paris Region® website (www.hubstart-paris.com), section “Publications”

Contact: saaseminar@hubstart-paris.com