

AIRPORTS, OFFICE PROPERTY-LED DEVELOPMENT & THE RESTRUCTURING OF THE URBAN LANDSCAPE - THE EXAMPLE OF AMSTERDAM-SCHIPHOL

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ABSTRACT

Formerly planned as stand-alone facilities in the cities' periphery airports - particularly those with hub function - have gone through a morphogenesis into urban-like entities. Processes like globalization for example or changed location requirements especially of the service and knowledge economy have given rise to new types of airports far more complex and interactive in their urban or metropolitan setting. In recent years, airports have not only made a contribution to a process variously referred to as "postmodern urban restructuring", but also in reshaping real estate markets. Especially, the airports' impacts on office property markets seems to be an under-studied area.

This paper provides an overview of the developmental status of new multimodal and multifunctional office quarters that have been emerged at and around Schiphol airport. For this purpose, an extensive desktop research was carried out, followed by a series of interviews with key personnel including experts from academia and practice.

INTRODUCTION

The Canadian sociologist Marshall McLuhan once stated, "any technology gradually creates a totally new human environment" (GORDON 2004: 1). In the face of a complex convergence of simultaneous processes of globalization, digitalization and technological innovations spatial structure and form of cities has been reconfigured. At the same time, globalization and the emergence of new time-sensitive business environments have led to an increased demand for aviation services especially among information and knowledge-intensive business services. Particularly for those kinds of globally-oriented enterprises, business success is distinguished by speed, flexibility, agility, global reach and the ability to provide information and knowledge as fast as possible.

Despite of all new kinds of efficient communication technologies and virtual connections, there still remains a variety of information and knowledge that cannot be articulated or codified either verbally, visually or symbolically. Opposed to codified or explicit knowledge, that is to say knowledge that can be

transmitted via a certain media, tacit knowledge is embedded in a person, a firm, a network or local context. The effective transfer of tacit knowledge necessitates trust and very often extensive face-to-face congregations (Läpple 2001: 23).

Under the general framework of the global (time-based) competition, the potentiality and the locational advantages of airports as network-infrastructure have become more integral than ever to business models and location decisions of an array of industries. Like no other infrastructure facility, airports integrate two locational qualities: worldwide connectivity by air and a multimodal landside accessibility on a local, regional and national scale.

For cities, especially those exposed to global competition, urban competitiveness is highly determined by connectivity and networks (Jones Land Lasalle, 2002: 1). Increasingly, cities set out to regard their airports not only as a “foyer or entree” to their urban area but as a competitive advantage within the global competition for future-oriented enterprises and highly skilled employees especially of the knowledge and information economy. In order to increase the attractiveness of airports and their hinterland as office sites for service companies, many cities, airport authorities and other actors have started to develop the locations at and around airports strategically.

In the recent past, an intelligent, comprehensive and innovative spatial development strategy of different actors as well as the new locational requirements of many economic sectors have contributed to the emergence of new office quarters at and around international airports. In Amsterdam for example, the developmental status has made considerable progress due to the airports' early opening of airport premises to office real estate projects. Today, the office submarket of Amsterdam Schiphol is ranked as top office location in the whole Netherlands realizing the highest rents nationwide.

Intention and Structure of the Paper

Despite its increasing importance, contemporary debates on the urban transformation process indicate that the changed role of airports and their impacts on the urban fabric in general and on (office) real estate markets in particular is still an under-studied area.

The intention of the paper is to analyze the emergence of new office quarters at and around Amsterdam's Schiphol Airport and the spatial relationship to other, more “traditional” office locations within the core city. Moreover, the developmental strategy, issues concerning success and limiting factors as well as the future potential of such locations will be discussed.

The paper is subdivided into two main parts. The first part of the paper provides a general discussion on the background of the transformation process airports have gone through over the last years and various issues related to the airports' new business environment. The second part of the paper aims to delve

deeper into the new locational pattern of offices that has emerged at and around Schiphol airport.

The Proliferation of a new Metropolitan Form

As mentioned above, globalization plays a key role in the current process of spatial transformation. Today, most cities are not self-sufficient anymore but rather part of a metropolitan area with several cities and sub centres. These new peripheral sub centers are characterized by a high concentration of commercial land uses formerly localized in the traditional urban cores. In many cases, this restructuring process of urban activities has led to an erosion of the original monocentric spatial structure with a core city dominating its urban hinterland. At the same time, less compact and less balanced polycentric spatial configurations have been established. Generally, the term polycentricity describes a scale-less spatial phenomenon which refers to multiple (sub) centers within a given area (Kloosterman, Mustered 2001). Polycentric spatial structures can evolve on the European, national, regional or urban scale.

In recent years, an array of neologisms have been created to denote the identified new metropolitan form (Lang 2003: 30). They are labelled for example as Exopolis (Soja), Technourbs (Fishman), Urban Village (Leinberger), Edgeless Cities (Lang) but the most influential and most prominent term is Garreau's Edge City (e.g. Lang 2003: 32). Garreau established a five-part definition according to which an Edge City has: (I) five million square feet or more of leasable office space - the workplace of the Information Age; (II) 600,000 square feet of leasable retail space; (III) more jobs than bedrooms; (IV) is perceived by the population as one place; (V) has not been anything like "city" as recently as thirty years ago (Garreau 1991: 6-7). Very often, the centralization of urban functions happens to areas of high accessibility like for example airports.

The Airport as New Spatial Entity

Airports - formerly planned as unimodal solitaires at the cities' edge - have gone through an evolutionary process from small terminal facilities into complex urban-like entities. International airports, particularly those with hub function, have emerged as new powerful nuclei of spatial development, altering decisively the spatial structure and the spatial economic organization.

The Aerotropolis Concept

By the year 2000, Kasarda coined for the first time the expression of "aerotropolis" - a "specific version of the edge city or center within a polycentric spatial structure" (Prosperi, 2007: 216). By definition, the classic Kasardian aerotropolis is a new urban form of aviation-oriented business cluster radiating up to 15 miles (25 kilometers) from airports and along major transportation corridors (Kasarda, 2004: 92). Under certain circumstances, aerotropolis may extend up to 20 miles (35 kilometers), "including a number of

activities and infrastructure such as retail and distributions centers, light industrial parks, office and research parks, district zoned for specific purpose, foreign trade zones, entertainment and conference facilities and even residential development that contributes substantially to the competitiveness of firms belonging to this area” (Flores-Fillol et.al, 2006: 1). Similar to a traditional city, which is centered around a city core, the aerotropolis is anchored by the airport city (see below).

According to Kasarda, an aerotropolis is the response to the realities of an increasingly speed-driven and globally networked world economy and the way people work in the 21st century (Kasarda 2004). When the demand for speed, flexibility, and networking takes center stages, as it presently does, businesses operating in time-sensitive working environments are forced to settle their location in the vicinity of airports in order to benefit from the airports’ services and networks and thus access to global markets (Conventz, 2008).

Excursus: The Airport City and the Underlying Drivers

Supposedly, the term of “Airport City” occurred for the first time in 1960 when the *TIME* magazine ran a five-page feature called “Airport Cities, Gateway to the Jet Age” (Time, 1960). Today, the term of airport city principally refers to “the more or less dense cluster of operational, airport-related activities, plus other commercial and business corners, on and around the airport platform” (Güller, 2003: 70). Although airport space has been extremely commercialized, one has to understand that this development is primarily a new business strategy to open up new sources of revenues in addition to revenues generated from air traffic. Facing an intensified competition within the aviation industry as a result of globalization, liberalization and deregulation, airport operators are forced to identify and implement innovative business models in order to generate additional non-aviation revenues. The main objective is to reduce the business risk resulting from one-sided dependencies and to supplement the traditional airport core business revenues (e.g. landing fees, gate leases, passenger service charges). According to the Boston Consulting Group (BCG), the non-aviation sector will be a key factor in terms of future growth and profit (BCG, 2004: 10). In many cases, non-aviation revenues already contribute more than 50 % to the airport operators’ profit (ATKearny, 2007: 11). In this context, especially retail activities and office real estate developments have become important for the airports’ financial sustainability (Conventz 2008).

Airports as Multimodal Hubs

With respect to the urbanization of airports and their surroundings landside infrastructure investments have become vitally important. Once planned as simple airport train station or terminal stop of a single rail or metro line, the airport rail stations have become interchanges with key positions within the national and international High Speed train systems, railway, and light rail networks. According to Güller, the airport interchange can be defined as follows: “Airport interchange is the airport railway station’s function as node in landside traffic networks: it not only serves air traffic passengers and airport employees, but also uses to interchange between regional and national public

transport networks (rail-rail, rail-subway, rail-bus, bus-bus...etc.)” (Güller, 2003: 131). The presence of efficient ground transportation increases the site’s potential as location for conferences, business, recreation or shopping.

The Case Study Amsterdam Schiphol

The Urban Context of Amsterdam and the Role of Schiphol Airport

Under the conditions of globalization, the urban shape of Amsterdam has been reconfigured. The urban system of Amsterdam and its growth pattern were perceived as “prototypical expansion of the monocentric city” (Salet, Majoor 2005: 19). From the early 1960s onwards, the historical inner city, characterized by channels, listed buildings etc., has not been able to fulfill the increased demand of large- scale leaseings on the part of the rising service and knowledge economy. As a consequence, companies started to settle in the surroundings of the urban ring road or sometimes further away. Initiated by this, the spatial formation of Amsterdam has gradually been transformed into a polycentric urban landscape. New concentrations of urban activities appeared for example at the southern edge of Amsterdam transforming the area into a dynamic growth zone (Bontje, 2005). In this context, Schiphol has become “the most prominent growth engine [...] and the largest employment concentration in the metropolitan area [...]” (Bontje, 2009).

Schiphol Airport

Amsterdam-Schiphol, located 17.5 km south-west of Amsterdam, is the Netherlands’ main airport, Europe’s 4th biggest airport and one of the world’s major hubs in international air traffic. Moreover, Schiphol is home base of AirFrance-KLM. Although considered as Amsterdams-Schiphol, the airport is actually located in the neighboring municipality of Haarlemmermeer and not on the city of Amsterdam’s ground. Through the different airline networks, virtually every major city or economic market in the world is reachable. This integration of the airport into international air traffic is supplemented by an ideal landside connection by all means of transportation. By road, Schiphol is linked by two major highways (A4 and A9) to downtown Amsterdam and the broader metropolitan area. By rail, Schiphol is directly connected to Amsterdam and to important western European business centers such as Brussels, Paris, Frankfurt or Cologne / Dusseldorf.

Schiphol and its Vicinity: The Nascency of an new Office Landscape

Today, the airport respectively its operator and owner - the Schiphol Group - have a world-wide reputation as pioneer in the field of airport-linked spatial development. According to Schaafsma, “two organizational decisions [...] formed the framework for the development of airport-related real estate” (Schaafsma, 2008: 71):

- the foundation of the Schiphol Area Development Company (SADC) a public private partnership between the Province of North Holland, the

City of Amsterdam, the municipality of Harlemmermeer, the Nationale Investeringsbank (NIB) and Schiphol Airport and

- the foundation of Schiphol Real Estate, a wholly-owned subsidiary of the Schiphol Group.

While SADC's main purpose is to develop the land in the airport's vicinity in accordance with the "mainport strategy"¹, the purpose of Schiphol Real Estate is to develop the airport-owned land "by constructing and renting out buildings, and by leasing land to other developers" (Schaafsma, 2008: 71). In contrast to other airports or airport operators in the world, Schiphol benefits from the circumstance that the commercial land on the airport territory and most of the land in the airport's vicinity is in its ownership (Schaafsma, 2008: 71).

Since the 1990s, the company's strategy has focused on a new commercially oriented approach, which has not only radically altered the passenger terminal but also the airport's hinterland. In the early 1990s, one of the first large retail real estate developments was the "Schiphol Plaza" - a shopping center designed as indoor urban square - on the top of the railway station. Through its commercial oriented approach, the Schiphol Group has substantially increased revenues through rents and passengers' purchase. In fact, the airport regularly attracts many Amsterdam residents who come here in order to shop or to relax in the airport's public section especially on Sundays and at night when most retail stores are closed (Conventz 2008).

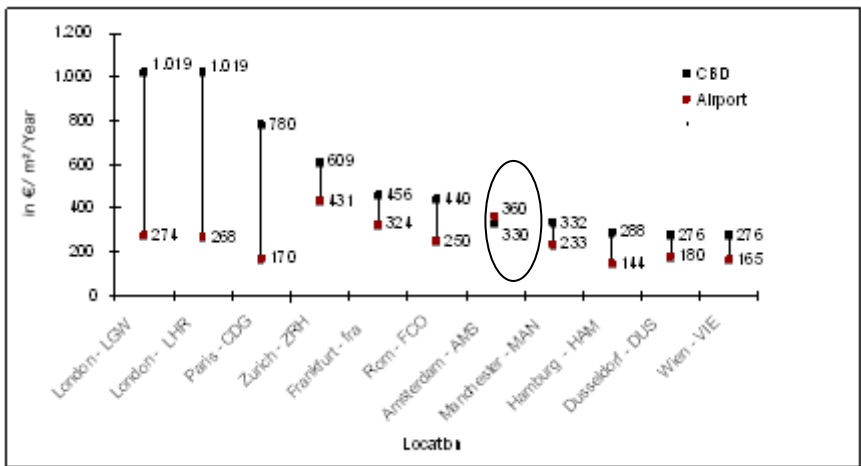
Another important component in the context of airport-centric spatial development is the property-led development of offices. At the end of the 1980s, the masterplan for Schiphol proposed for the first time the idea to realize office projects in the central area within the loop of the access roads (Kloss and de Maar, 1996: 82). Today, the strip is known as Schiphol-Center. Since the beginning of the 1990s, new office sites have gradually been built up (Schiphol Group, 2010; Kloss and de Maar, 1996). Currently, the total stock comprises nearly 200.000 m² of office space (Jones Lang Lasalle, 2010: 9). In the future, the office stock at Schiphol-Center will grow by another 8 - 15 percent due to a number of projects in the pipeline such as the extension of the Outlook Building (Jones Lang Lasalle, 2009a: 11).

The construction activities of the office complexes were accompanied by a simultaneously grown number of high-quality facilities such as hotels of different categories or meeting and conference centers. Similar to the office buildings, most of these premises are either directly linked to the terminal via walkway or promenade. All this helped to transform the location of Schiphol-Center into a multifunctional and multimodal premium business site at the periphery of Amsterdam that is today considered to be one of the top office locations of the whole Netherlands.

The high value of the airport sites is reflected in the office rents. In recent years, Schiphol-Center has become the country's top office location achieving the highest office rents countrywide. From 2004 - 2007, the measured prime rents at Schiphol-Center were at 350 € / m² per year (Jones Lang Lasalle, 2009b, 2010: 10). At the end of 2009, the annual top rent was around 365 € / m² (Jones Lang Lasalle, 2010: 10). That was a decrease by 3 percent compared with 2008 where a maximum of around 375 € / m² was reached (Jones Lang Lasalle, 2010: 10). Recently, contractual agreements with maximum rents of

390 € / m² per year or even above have been registered (DTZ Zadelhoff, 2009). In comparison to this, the South-Axis (Zuidas), the actual central business district of Amsterdam halfway between city center and Schiphol Airport, came up with approximately 335 € / m² per year in 2009. In the city center itself, a prime rental value of around 255 Euro /m was realized at the end of the fourth quarter of 2009 compared to 280 € / m² in 2008 (Jones Lang Lasalle, 2009b, 2010: 10).

Accordingly, two results can be summarized: Firstly, in the Amsterdam office market, contrary to what one might initially presume, it is not the city center which is the most expensive office location, but Schiphol-Center at the city's edge. That is a unique finding as the comparison with other selected European top office locations such as London, Paris or Frankfurt plainly shows.



Source: own illustration, modified according to CB Richard Ellis, 2009

Figure 1: Selected prime rents airport vs. CBD

Secondly, despite the considerable turbulences which have affected the real estate markets over the recent years, the prime rents at Schiphol-Center remained relatively stable. The same applies to Amsterdam South (Zuidas). From an international perspective, the corridor Schiphol-Zuidas is perceived as an international top location within an otherwise modestly priced Dutch office market. Nevertheless, one has to understand that the Dutch prime locations are moderate in size, market dynamics and rents compared to other European top locations such as London and Paris. This especially applies to Schiphol-Center, which is classified as small and relatively rigid by experts (Jones Lang Lasalle, 2009: 16).

From the very beginning, the main strategy of the Schiphol Group was to attract companies that are either airport-related or have a strong affinity to the aviation business. However, scientific literature does not offer a standard definition for neither of these terms. One approach defines airport-related

companies as companies “that have their business at the airport (such as airlines) or use the airport intensively (such as the head offices of international companies)” (Schaafsma, 2008: 71). Indeed, Schiphol has been very successful in attracting internationally oriented companies offering superior business services which located their international or European headquarters at the airport. Today, the demand for office space is recruited from a broad spectrum of business sectors such as finance, consultancy, traffic and transportation, government or healthcare (Conventz, 2008). Among the office space occupiers are prominent companies or institutions like for example the American Chamber of Commerce, AXA Investment Managers, Citibank International, the Dutch infrastructure Fund or Delta Hydrocarbons (WTC Schiphol, 2010). Hence, the demand comes from enterprises that are not directly related to the aviation business.

In summary, over the years the developmental status at Schiphol Center has made considerable progress due to the airports’ early opening of airport premises to office real estate projects and other real estate developers. Today, the submarket has reached a certain level of maturity characterized by a manageable amount of high quality office properties with different locational qualities and price ranges. Basically, the closer the office is to the passenger terminal, the higher is the office rent. Future prospects expect a further densification of the strip and new office constructions like for example the Gateway building (Conventz, 2008).

Office Property Developments around Schiphol

Apart from the office property related activities at Schiphol-Center, ambitious and high-end office developments have also taken place at other locations in the airport’s vicinity. This particularly includes locations in the municipality of Harlemmermeer like Schiphol (East, South and Rijk), Hoofddrop-Beukenhorst or -De Hoek and Lijnden (Real Estate Handdbook, 2008; DTZ Zadelhoff, 2009). Moreover, ambitious office developments are taking place in Beukenhorst, Badhoevedorp-Zuid and Schiphol-Elzenhof (SADC, 2010). The last years have shown that the location has become a favored place for a wide range of international companies from a variety of sectors such as finance, consultancy, IT & telecommunications, retail, governmental institutions, community & social services, traffic & transportation or healthcare (cf. Amsterdam Airport Area 2009). In contrast to Schiphol-Center with its top rents, the office landscape around Schiphol is characterized by its differently specialized subzones and a broad spectrum of rental ranges. The rents in the first half of 2009 were between 90 € / m² / Y. in Hoofddorp and 220 € / m² / Y. as maximum in Beukenhorst South (DTZ Zadelhoff, 2009).

The enormous success of Schiphol and its surrounding as office location can be attributed to a succession of long-term and innovative policies aiming to enhance the business environment especially for those companies that can be assigned to the so called “mobile industries”. Such industries are generally marked by their integration into international networks, their desk sharing practice, low transaction costs, their high need of frequent (face-to-face)

contacts to clients and their time-sensitive working environment (Conventz, 2008).

The Submarket’s Advantages and Shortcomings

Especially for the above-mentioned industries, locations at and around Schiphol provide a wide range of advantages. The most important locational advantage enterprises can benefit from is owed to the airport’s multimodal transportation links and its double hub function. While the airport integrates the location into the airlines’ networks, the airport’s train station covers this function for terrestrial transportation modes. This newly defined intermodality and connectivity at the intersection of local, regional and international transportation networks facilitates the accessibility of companies by markets and clients as well as the flexibility of their employees concerning the mode of transportation. The centralization of urban activities formerly localized in the CBD such as conference and meeting facilities or hotels has moreover formulated a multifunctional office location. Together with the close proximity to locations with a strong international orientation like for example Amsterdam Zuid the spatial concentration of different high-quality business facilities helps businessmen to reduce time consuming journeys.

Beside the array of advantages described above, a number of shortcomings has to be addressed. Apart from high lease prices, shortcomings may arise from the extreme noise pollution, the traffic congestions during peak traffic periods or the difficult situation regarding parking and parking fees at Schiphol airport (Conventz, 2008). The Amsterdam office market is characterized by an extensive office supply (Conventz, 2008). The close proximity and the good transport connections to the city center of Amsterdam or to Amsterdam South increase the competitive pressure. The airport submarkets have to face this market environment. In addition to this, the low urban design quality (of for example public spaces) or the currently not fully developed infrastructure, particularly the local supply of food for employees during lunch break, could negatively impact the demand for office space and accordingly the future development of the office locations at and around the airport (Conventz, 2008).

The following table summarizes again the location’s advantages and shortcomings.

Advantages	Shortcomings
Higher flexibility through multimodality	High lease prices
Round-the-clock productivity	Difficult local supply
Multifunctional and high quality Business infrastructure	Extreme noise pollution / emissions
Short distances (e.g. other office locations)	Weakly developed walkability

High quality office space and sophisticated architecture	Low urban design qualities
Availability of office space to let	Difficult car accessibility during rush hours

Source: Own illustration, 2009

Table.1: Submarket’s advantages and shortcoming

Perceptions

To date it still remains unclear whether office space at Schiphol is to be perceived as an additional part of a local office market or as a competitive submarket. In terms of space, the Amsterdam office market is characterized by an extensive office supply. The submarket has to deal with this market environment. Based on the spatial circumstances, most experts perceive the submarket as a new supply of high quality office space and thus as an addition to the overall market. It has been frequently labeled as a new spatial entity of postmodern urban development. Airports are not primarily perceived as a transportation node but as an advantageous business location. Multimodality combined with an extensive business infrastructure is understood as a crucial competitive and developmental advantage within the global time-based competition (Conventz, 2008).

As a result of this, many experts expect a division of labor between the locations of the inner city areas and the airport. While the traditional districts or the traditional city center will still accommodate the local elements of a community, the airport and its surroundings will be chiefly in demand among mobile industries (Conventz, 2008).

Another reason for the positive perception of office space at Amsterdam-Schiphol and its surroundings results from the scarcity of high quality properties in the city’s prime submarkets. The new offer has a share in compensating this deficit (Conventz, 2008).

In contrast to this, only a minority of experts observes a competitive relationship to more “traditional” business locations for example within the core city or the suburban office locations such as Zuidas (Conventz, 2008).

Summary and Concluding Remarks

As much as people were attracted to ports, rail stations or motorway intersections in the past centuries, airports have rapidly become new urban growth generators, hubs of information and knowledge exchange and business centers. As the example of Amsterdam Schiphol clarifies, airports are not primarily perceived as a transportation node but as an advantageous business location. Multimodality combined with an extensive business infrastructure is understood as a crucial competitive and developmental advantage within the international time-based competition. With the expanding floor space for office uses at and around Schiphol airport, a new urban locational pattern is evolving. This kind of locational quality is exactly tailored to the locational requirements

of the so-called mobile industries or companies belonging to the information and knowledge economy. The willingness of those customer groups to pay top rental prices far beyond the average reflects the demand for such locations.

In contrast to many other examples from around the world, Schiphol is very far in its developmental progress. Nevertheless there are still deficits especially concerning the urban design qualities. For the future it is expected that prospective improvements of the design quality will further contribute to fostering the business estates' attractiveness at Schiphol and its surroundings.

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URBAN TRANSFORMATION: Controversies, Contrasts and Challenges

ⁱ Mainport strategy: the land should be available for airport related European distribution facilities, combined with European head offices.