

# TUD-deelrapport Fase 2

ten behoeve van de Commissie Ruimtelijke Ontwikkeling Luchthavens

## Deel C: Internationale vergelijking

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## Deel C: Internationale vergelijking

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*TU Delft, 12 December 2008*



## Airport Metropolis:

### Managing the Interfaces

An international collaborative research project

## **Lessons from International Comparison for the Commission ROL**

12 December 2008

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## **1. Introduction**

This report summarizes the lessons from the international comparison for the Commission ROL ('Commission on the Spatial Development of Airports', in Dutch *Commissie Ruimtelijke Ontwikkeling Luchthavens*) as carried out by the Airport Metropolis team; a research collaboration between Queensland University of Technology, Delft University of Technology and the University of North Carolina (see also [www.airportmetropolis.qut.com](http://www.airportmetropolis.qut.com)). A brief overview of the Commission's mandate and international comparison request are provided in Section 2. Section 3 provides a brief overview of Schiphol, focussing on its place in global aviation and in Netherlands spatial development. Schiphol and the Netherlands are internationally-recognized leaders in both areas. Schiphol is placed in context with a short discussion of the land use and real estate developments on and surrounding selected large hub airports. A summary of the role of airports in land a real estate development is provided in Section 4, which leads in to the research approach taken in the international comparison in Section 5. The research findings are provided in Section 6-8. The conclusions for the study and their relevance for the Netherlands are outlined in Section 9.

## 2. The Commission ROL Mandate and the International Comparison Request

Amsterdam Schiphol Airport (Schiphol) has become increasingly involved in the spatial development of the areas surrounding airports both as a real estate developer, and as an actor in near airport development and planning decisions. The Dutch government has become concerned that these developments may be at the cost of a number of public interests. Furthermore, they are worried that these developments will increasingly lead to court cases such as the recent controversy over the Groenenbergterrein, which has resulted in a court case (brought by the real estate developer Chipshol) and has been discussed in Parliament. Chipsol is a private firm while Schiphol has been able to act as both a private developer and as a public corporation.

In response to a request of the Dutch parliament, the Dutch Minister of Transport, Public Works and Water Management and the Minister of Housing, Spatial Planning and Environment established the Commission ROL. This commission has been asked to study the role and position of airports (Schiphol and other Dutch airports) in the context of local land use, especially for non-aeronautical functions.

The Minister posed the following questions to the Commission (see letter to Parliament 13 June 2008):

- 1) What roles do airports (as business organizations) play in land and real estate development near airports (as physical locations)?

What is the state of affairs now, as compared to the past and possible future?

- 2) How is the cooperation among governments and private actors (including airports) concerning the spatial development near airports regulated?

Are changes needed in the relationships between public and private parties to better safeguard public interests?

- 3) Are airports increasingly becoming active real estate developers?

If yes, why, and which role is the government taking?

- 4) Is a litigious relationship between airports and other actors a consequence of an increasing airport involvement in real estate development?

Are there effective alternatives to litigation in settling disputes with respect to real estate development around airports?

- 5) Is it helpful to make a distinction between airport-dependent and airport-related (business) activities?

If yes, what criteria can be formulated?

In the light of recent developments surrounding the possibility of adding an additional parallel runway (Kaagbaan), the Ministries added questions about land use policy and property acquisition for aeronautical purposes:

- What are the roles of the various governments (local and national) in land use policy and property acquisition with respect to changes in airport runway systems?
- How should the government handle strategic land parcels near airports? Are there parallels with other transportation infrastructure, such as train stations and seaports?
- Should the national government have more instruments at its disposal to safeguard the path between initial policy explorations and assigning uses to parcels in a land use plan?
- What role should local governments and airports (as organizations) have in this process?

The Commission was given an explicit mandate to address these specific questions but also to expand the scope of their efforts as far as necessary and practical within the time and resource constraints to address the central issues concerning airports and local land development. The Commission, in turn, asked Delft University of Technology to inform its report. The work was done in two phases. Phase 1 consisted of an issue analysis and the development of a conceptual model, and was reported separately in a Dutch-language report. Phase 2 consisted of:

- A. Case studies examining the governance structures regulating the spatial development of non-aviation infrastructure in the Netherlands, in particular railway stations and the Port of Rotterdam, searching for precedent for successful strategies that could be applied to the Netherlands aviation sector;
- B. Case studies of Dutch regional airports study examining the spatial development issues and related governance structures, searching for precedent for successful strategies that could be applied in other airports; and
- C. International comparisons to explore the airport governance issues cross-nationally, drawing on the expertise of the Airport Metropolis research project, housed at Queensland University of Technology, the University of North Carolina, and Delft Technical University.

The current report is related to Task C. This task has been carried out by a separate, international, research team drawn from the Airport Metropolis research project and has resulted in a separate, English-language report (the other reports are in Dutch).

To gain in-depth insight in the problem, the Commission started with consulting a wide range of stakeholders and experts by means of face-to-face interviews. Based on these interviews, the Commission has developed a list of 15 governance-related issues regarding the Ministries' mandate. A summary of the issues is provided in Table 2.1.

Table 2.1 Overview of the Issues Identified by the Commission ROL

Cat.	No	Description
Societal goals	1	Airside spatial planning has a large impact on the spatial patterns on the ground (i.e. aviation creates space scarcity on the ground). However, policy making is unconnected (i.e. airport policy making takes only the goals for aviation and noise hindrance into account).
	2	The gains and losses of aviation are unequally spread (an aspect that is not taken into account in the obligatory societal cost-benefit analyses).
	3	There are tensions between the national goals (mainly accessibility and noise hindrance), the regional goals (mainly regional economic growth) and the local goals (growth of the airport as such).
	4	Ambiguous public policy: <ul style="list-style-type: none"> <li>• The national and regional government are in conflict about the need to reserve land for a possible new runway</li> <li>• The Schiphol competitive position is one of the central goals of the national government. However, recently, the central government has introduced special air taxes, which has decreased the competitive position of Schiphol considerably</li> <li>• The spatial-economic relation between the airport and the surrounding region is non-existent in policy making.</li> </ul>
'Double' roles	5	Schiphol combines many different roles and interests as it: <ul style="list-style-type: none"> <li>• Is responsible for the airport</li> <li>• Is (co-) owner of many regional airports in the Netherlands</li> <li>• Has its own 'land acquisition company'</li> <li>• Has direct access to central government</li> </ul> In this way one runs the risk that (1) the commercial interests dominate over the public interests resulting in suboptimal solutions from a societal point of view (2) the prices charged by Schiphol are too high ('market power').
	6	The regional government has also 'double' goals (safeguard public interests and land development). This is ok if there is transparency etc. The latter is questioned.
	7	The national government and the municipalities of Amsterdam and Rotterdam own (part of) the airports. This can potentially lead to conflicts with the public interests.
Lack of coherent policy making	8	Lack of integrated spatial planning for the areas around Schiphol (only partial decisions: decisions for part of the area or from only one point of view).
	9	Each government actor is aiming at its own interests, they do not work together and no actor is mediating or steering.
	10	Regional airports and local governments fight against Schiphol and KLM.
Policy making shortcomings	11	The position of Schiphol is threatened due to (1) a lack of integral, spatial-economic vision on the Schiphol region (2) dependency upon home carrier KLM, which does not necessarily stay at Schiphol
	12	More court cases (although this is questioned)
	13	Schiphol benefits from the spatial reservations for possible additional runways result, but does not pay for the (large) opportunity costs
	14	The land reservations instrument is hardly used by the government. As a result, the government has to monitor constantly which ground activities are going to be undertaken.
	15	There is general dissatisfaction with the existing establishment policy.

The Commission asked us to support its efforts by gathering cross-national information that might support the Commission in developing their advice and the Ministries and Parliament in policy making with respect to land development surrounding Schiphol and regional airports in the Netherlands. In addition, the Commission asked us to take their 15 issues as the starting point for the investigation, and to do an international comparison to answer the following two questions:

- 1) What roles do airports (as business organizations) play in land and real estate development near airports (as physical locations)? Furthermore, what is the state of affairs now, as compared to the past and possible future?
- 2) Which avenues are used abroad to safeguard public values, and how do they work, and what can the Netherlands learn from this international experience?

### 3. The Research Approach

To do the international comparison and answer the two questions that the Commission asked us to address (see Section 2), we took a three-step approach. *First*, we collected the insights so far gained in the Airport Metropolis Project to answer the first question the Commission asked as to address (*What roles do airports (as business organizations) play in land and real estate development near airports (as physical locations)? Furthermore, what is the state of affairs now, as compared to the past and possible future?*). Section 4 works through the context of Amsterdam Airport Schiphol from regional to global arenas, presenting a number of cases that highlight the diversity and levels of land development both on and off other major airports. Showing a growing trend for large scale integrated airport city developments, the report then moves on to a brief summary of airport roles in real estate development (Section 5) with a more complete answer given in Section 9.

*Second*, to aid in the examination of the Commission's issues, the collection and analyses of data from abroad and the interpretation of lessons from abroad to relate back to the Commission's issues, we identified which public failures were at stake using Bozeman's (2003) typology of public failures, found in Appendix B.

*Third*, a selection of airport-centered cases has been analyzed from North-America, Asia Pacific (Australia and Japan), and Europe to search for arrangements that relate to some, or all of the airport related public values and issues from the Netherlands. By cross-referencing cases with the public failures and known public values for public sectors and infrastructures (De Bruijn and Dicke 2006; Van de Riet and Turk 2006), arrangements were identified that not only related to the Commission issues, but also showed insights for the public values and failures at stake. Each arrangement has been reviewed to detail what it is, how and why it works, and what makes it work (or not work) in sections 6, 7 and 8. This method of enquiry also considers Williamson's (2000) institutional economics framework to identify the nature of impediments and enablers to the effectiveness of arrangements. This means that it should be identifiable whether a 'trigger' of an arrangement's effectiveness exists within the culture, institutions, governance or day-to-day transactions surrounding each arrangement (Williamson 2000).

In addition to the insights of the Airport Metropolis team, key informants have been used as core sources of information from within governance networks of each airport region. They include airport managers and airport representatives from different (often government) organizations, who have considerable information about the history and needs of past and current airport arrangements. Their responses to our questions have been cross-referenced with reviews of the land use and legal structures in play where there was any ambiguity, in order to mitigate any distortions of perspective bias from interview responses. It is essential to note that having an insider perspective of airport arrangements is imperative to identify elements that hinder or enable effectiveness, as literature alone is unlikely to describe the interaction of institutions and culture, for example, with an arrangement's acceptability in its airport region.

#### **4. Overview of Schiphol and its Global Context**

Amsterdam Schiphol is frequently said to be one of the premier commercial airports of the world and is a pioneer of the airport city model of development. In partnership with KLM, Schiphol became the fourth-busiest passenger airport in Europe, only to be recently edged into fifth-place by increased traffic at Iberia's hub in Madrid. Schiphol served 47,794,994 passengers in 2007. That successful partnership has given Amsterdam far greater air accessibility than would be expected on the basis of Randstad's characteristics alone. Partially as a consequence of the air service concentrated at Schiphol, the Amsterdam region has prospered, creating a level of employment that exceeds the labor supply of the immediate Amsterdam area.

The high level of air service has made Schiphol itself a major employment center. Some 62,000 people are employed on Schiphol grounds daily. These employees tend to reside relatively close to Schiphol but their homes are sprinkled throughout much of the Netherlands. Most of these do not work for Schiphol itself but are employed by airlines (especially KLM), government agencies, aviation support firms, cargo handlers, and retailers serving the travelling public.

Schiphol's daily passenger flow of over 130,000 daily provides the demographic market base for expansive, well-appointed shopping and entertainment arcades inside and, more notably, outside the security zone. By combining terminal design with mall design, Schiphol has tapped non-aviation revenue streams through concession rents and passenger purchases. Non-aeronautical development has not been restricted to the terminal area, and spreads out from the terminal to include a Sheraton and a Hilton hotel, and the 4 million sq. ft. World Trade Center with meeting and commercial facilities and regional headquarters of such firms as Thomson-CFS and Unilever. Microsoft also has a vested interest in the area, pursuing the development of a European conference center just beyond the World Trade Center.

Like other airport cities, outlined below, Schiphol is attempting to develop itself as a leisure destination for regional residents that is cross-subsidized by travelers. A 100,000 sq. ft. multimedia aviation theme park (Dreamport Schiphol) is being developed on the terraces of Schiphol terminal. Dreamport Schiphol, a cooperative venture between Schiphol, KLM, and Boeing, will be a revival and update of the aviation museum which was previously on airport grounds

Surrounding Schiphol (inside and outside the airport fence) are large tracts of land being developed for office, leisure, light industrial, and logistics purposes. These include Schiphol South-East and Schiphol Logistics Park for cargo distribution and 3PLs; Anthony Fokker Business Park and Schiphol Eindhoven with 1.4 million sq. ft. and 1.8 million sq. ft. of offices, respectively; Schiphol-Rijk for time-sensitive light industrial and the Schiphol Golf and Business Center for sports, golf and leisure activities that are to complement a corporate office campus on the site.

Providing further logistical advantage, the A4 and A9 high-speed motorways are both within a mile and a half of the airport center. Radiating from Schiphol along these motorways are strings and clusters of business parks, logistics parks, high-tech industrial parks, distribution centers, information and telecommunication complexes, and wholesale merchandise marts such as the Aalsmeer Flower Auction Market—all of which are airport-intensive users.

A modern train station, directly under the air terminal, efficiently connects travelers to the city center, the rest of the Netherlands, and much of Europe. The re-routing of the main trunk rail line between Amsterdam and Rotterdam in 1995 transformed Schiphol from a relatively inaccessible airport to one of the most accessible points in the Netherlands. At the same time, the accessibility of Randstad cities to air travelers increased immensely.

Amsterdam Zuidas within the southern reaches of the city of Amsterdam, about six minutes by airport expressway or airport express train to Schiphol's passenger terminal, is an excellent example of airport-region synergy. Zuidas is a 21st century airport "edge city" containing over 10 million sq. ft. of class A office space and retail, along with a large mixed-use commuter rail terminal with a World Trade Center above it. This airport edge city is the home of the world headquarters of both ABN Amro and ING banks and numerous regional corporate headquarters that heavily rely on Schiphol airport. The desirability of Schiphol's terminal area office developments and of Zuidas can be seen in the relatively high office rents and industrial rents – possibly the highest in the Netherlands.

Schiphol's combined aviation and non-aviation future, however, ultimately rests on the skilled labor force located in and near Randstad. The highways and train lines that link Zuidas with the airport also connect with a labor shed that stretches to Almere and other residential growth centers. To a degree rarely seen elsewhere, the airport, as one anchor of the Schiphol-Amsterdam-Almere corridor, is integrated into regional and national ground transportation and land use planning.

While a centrally-located airport, served by a world class airline can generate economic growth by attracting cargo processors and distribution centers, the larger contribution is in making a skilled labor force accessible to a global market. The main advantages of a seamless system of air navigation, efficient airport, coordinated ground transportation and adapted land use are that regional firms receive an efficiency advantage and that advantage attracts the attention of firms searching for locations for new facilities. With fast frequent train service to Schiphol, which has excellent air service to London, Amsterdam becomes a viable office location for European and globally-oriented businesses and organizations. Schiphol and the broader Amsterdam Airport Area may therefore be able to attract firms that might otherwise choose London or Paris. Survey evidence suggests that the airport and its multimodal commercial mix has been a factor in over 1,000 international companies choosing the Amsterdam region as a place to invest and create jobs, many of which located in downtown Amsterdam and other locations, not just Zuidas.

#### *Planning and Governing the Schiphol-Randstad Area*

To a degree that may be difficult to acknowledge today, the development of the Schiphol-Randstad area is an outcome of social learning – structured trial and error. The employment now located in Zuidas was originally planned for the redeveloped banks of the IJ. The train line that brings commuters to the airport was meant to speed access to the airport and inter-city travel.

The idea of airport centric development, effectively turning airports into cities, has been around at least since the days of Le Corbusier. H. McKinley Conway attempted to popularize the concept as early as the 1950s. Peter Poot developed a plan for the Badhoevedorp Triangle during the 1980s. Nevertheless, the planning and policy climate has allowed Schiphol's continued growth and diversification in land development.

Schiphol is in a unique position in terms of the planning and policy climate.. In almost all countries, the national government regulates air transportation as a means of ensuring inter-state (provincial) and international commerce. In most cases, land use regulation falls to the localities. U.S. law, for example, maintains a strong divide between Federal control of the airways and local control of land use. Federal land use control extends to ensuring safe and environmentally-sustainable aviation.

Dutch law requires that the national government be involved in spatial planning. Although much of the detail has in recent years been left to the provincial government, national government involvement means that national interests are taken into account. Schiphol receives comprehensive consideration in Dutch national spatial policy (Nota Ruimte) and the National Spatial Framework (Nationale Ruimtelijke Hoofdstructuur).

Furthermore, Dutch spatial policy aims to be integrated with mobility policy (Nota Mobiliteit) and regional economic policy (Gebiedsgerichte Economische Perspectieven). The implication is that ground transportation can be effectively coordinated with airport capacity enhancement and with land use. Thus, the Zuidas development on the south side of Amsterdam was coordinated with new housing development, mainly in Almere, and with transportation directly to Schiphol Airport. Because of national government involvement, the Zuidas development could be planned to compete with alternative sites in London, Paris, and Frankfurt. In fact, the latest round of spatial policy making explicitly states that the national government wants to transform spatial planning into spatial development with the central aim of strengthening (or at least not harming) the international competitive position of the Netherlands. Consequently, Schiphol is accorded a key position in regional planning (e.g., Randstad 2040 – Startnotitie). It is unlikely that a lower level of government would be able to support such a far-ranging strategy or be able to bring the level of resources required for coordinated infrastructure investment to bear.

Besides the official planning bodies, there is a myriad of coordinating structures and consultation bodies. A key example is the Commission for Regional Discussion Schiphol (Commissie Regionaal Overleg luchthaven Schiphol: CROS) consists of representatives from the air transport sector, regional government, and citizens. Schiphol Airport, the Dutch air traffic control organization and the three airlines, KLM, Transavia, and Martinair, represent the air transport industry. Three provinces, North Holland, South Holland, and Utrecht, and 26 municipalities send government representatives. There is also one citizen representative for each municipality. Because some of the municipalities are distant from Schiphol, the commission is sub-divided into nine geographic clusters. The commission provides an on-going forum to discuss safety, noise, pollution, and other issues but it provides a framework for broader conversations about the development of the airport region. Schiphol has become the center of an aerotropolis due to the unique planning and policy climate.

### *Issues Confronting Schiphol and its Wider Region*

Growth has not been without costs. Airport-centered functions have outgrown the pre-existing governance structures. Air travel is fundamentally multi-modal. In an era when air travel was considerably more limited and airports were not major employment centers, the provisions for inter-modal transfer were not critical. When cities were smaller and regions less closely integrated, coordinated land use decisions were not as salient as they are today.

In order to compete for jobs and regional economic benefit in the 21st century, regions need to coordinate air access, ground access, commercial land use, residential land use, recreational land use, and work force development. In general, existing policy and planning apparatus are inadequate to the task. The same shortcomings are seen in the issues surrounding airport area real estate development and in airport capacity expansion.

The risks and rewards are substantial. There appear to be disproportional payoffs to regions drawing the most attractive economic activities, pushing regions to invest in potential competitive advantages, including airport and other infrastructure. On the other hand, there are risks entailed in investing in hub airport facilities.

Since the merger of KLM and Air France, the need for two hubs, so closely spaced, is increasingly questioned. Dual hubs, such as Frankfurt-Munich, are generally only feasible when space at the main hub (Frankfurt, in this case) is severely constrained. Munich Airport has recognized the risks of its status as secondary hub and has negotiated a substantial airline participation in its new terminal. The consequences for infrastructure investment need to be considered in the case that Schiphol loses its hub status. Schiphol is, of course, acutely aware of its potential rivalry with Charles de Gaulle.

The rise of new carriers, specifically those based in the Mideast, poses a related threat. It is possible that, for example, Dubai, aided by the large orders placed by Emirates Airlines, will evolve into an intercontinental hub linking large and medium-sized cities in Europe with South Asia, Southeast Asia, and Oceania (including Australia). Such a development, if it were to occur, might reduce the need for hub capacity in Europe while eroding returns on some of the most profitable routes for European carriers.

These points underscore the need for a strong airline-airport-region alliance for regional economies. The rewards and risks of the situations just mentioned, while beyond the purview of this report, need to be a central component of airport-related regional strategic decision-making.

### *Schiphol in Context*

Schiphol's organizational strategy is based on three pillars: strengthening the competitive position of Schiphol mainport, 2) boosting non-aeronautical income, and 3) reducing corporate risk by spreading its expertise over participation in several airports in the Netherlands and beyond. These three components of their strategy are closely intertwined. Maximizing non-aeronautical income may reduce the pressure on aeronautical charges, thereby strengthening Schiphol's competitive position as an airline hub and, therefore, Amsterdam's desirability as a business location. Airports are complex operations requiring a very diverse expertise. Aside from being capital-intensive infrastructure, they are knowledge-based organizations. Applying accumulated expertise to airports around the world helps finance and reward the acquisition and application of specialized knowledge that also strengthens Schiphol's competitive position as an air hub.

Schiphol's mainport is very much an alliance between an airline with a world-wide network of flights, an airport that offers needed services at the best possible price, and a region with a world class labor force. Schiphol's airport city, which is quickly expanding into an airport corridor, is meant to provide the facilities and services to support all components of this alliance. Schiphol's involvement in land use planning and real estate development is one aspect of its support for the regional coalition.

Firms often follow a three-step process in siting new facilities. First, they decide on the need for new investment. Second, they select a region with a suitable location that offers the human and natural resources they need. Third, they choose a property. In practice, however, the difficulty in finding suitable properties, possibly with improvements already in place, often drives firms back up the decision tree. The lack of appropriate facilities can push firms to other regions to renew the property search elsewhere. Because air access is critical or important to many contemporary corporate activities, the right facilities can attract firms that might otherwise locate elsewhere and hold those that would most prefer a particular region.

The Microsoft conference center, mentioned above, is a good example of the potential advantages of coordinated airport-land use development. Microsoft's European headquarters are in Paris, but are located in La Defense, which is inconveniently located for quick turnaround air travel. A corporate conference facility at Charles de Gaulle could reasonably have been their first preference for a conference facility allowing Microsoft managers to fly (or travel by train) from all over Europe, attend a product rollout or other presentation, and then either return home seamlessly or linger for other business or pleasure.

A frustrated site search may have led to a consideration of other regions. Schiphol's ability to offer the needed facility may have compensated for the distance from corporate headquarters. In this way, Schiphol's real estate development may have strengthened the aeronautical functions of the airport, KLM's competitive position, and, more importantly, the Amsterdam region's employment base in a way that would not otherwise have been possible.

In order to provide a context for the developments around Schiphol, we provide a short descriptive overview of selected major hub airports around the globe. The over-representation of emerging economies is not accidental. The major urban regions in those countries are where the demand for expanding aeronautical capacity are to be found. Like Schiphol, these airports and their surrounding regions, contain all the major elements of an aerotropolis. First, the regions have developed economies based on producer services and the management of far-flung companies that are heavily reliant on passenger air travel for their operations. Second, the airports all serve as major airline hubs, generating a disproportionate passenger flow. Third, those assembled transfer flows support additional flights and enhance their region's air accessibility. Fourth, the passenger flows help airports generate non-aeronautical revenue through expanded retail operations. Fifth, these airports all support on and, sometimes, off airport real estate development. Finally, each region has made strides towards integrating air transport, ground transport, and land use.

Established in 1916, Schiphol differs from each of these in that it is older, closer to its center city, and has a smaller land area than most. Several of these airports are products of the jet age expansion of air travel, prompting a search for a new and larger site allowing for airport expansion. A few were designed to be airport cities from the beginning. While the Amsterdam region has considered new, more capacious airport sites, including a man-made island in the North Sea and a site in the reclaimed Flevopolders, these proposals have never been judged to offer advantages that outweigh their drawbacks.

*Dubai: United Arab Emirates*

The leaders of Dubai have been visionary in their use of air commerce to foster investment and development in the emirate. Recognizing that the emirate's position halfway between Asia and Europe could make it an important transit point for passenger and cargo traffic, a decision was made in the mid-1980s to fully liberalize its air cargo and passenger access for development purposes.

This put air cargo at Dubai International Airport, which opened in 1960, on a rapid trajectory. By 1998, the airport was handling 300,000 tons annually in its Cargo Village, with another 120,000 tons flowing through temporary areas. Dubai's air cargo has continued its rapid trajectory in recent years to 1.5 million tons in 2006, up from 940,000 tons in 2003. With cargo growth at the airport continuing at a breakneck pace, new facilities have followed suit. The first phase of a Mega Cargo Terminal with annual capacity in 2018 expected to be 5 million tons has been completed along with a state-of-the-art fresh flower facility.

Dubai's airport is within a free trade zone, which makes it even more attractive to companies looking to invest in the Emirate. The Dubai Airport Free Zone (DAFZ) has 1.2 million square meters of space for offices, warehouses and distribution centers and manufacturing plants. Its benefits, including 100 percent foreign ownership of companies in the Zone, tax-free status for up to 30 years and no personal income tax, are designed to attract those companies producing high value-to-weight goods and shipping them by air. There are over 330 companies in the DAFZ, including Bang & Olufsen, Boeing, Chanel, Diageo, Johnson & Johnson, LVMH, Mitsubishi, Caterpillar, Porsche, Rolls Royce and Wyeth Pharmaceuticals.

So successful has development been at and around Dubai International Airport, that the emirate's leaders are currently constructing a massive second generation airport complex 10 years earlier than planned. The new Dubai World Central Airport, now under construction, will become perhaps the defining Airport City/Aerotropolis model. It will include planned clusters of industries in logistics, high technology, financial services and tourism whose needs are served by aviation. The entire Airport City complex, when fully built out, will cover 140 square kilometers (54 square miles), including an airport operating area composed of six parallel runways and three passenger terminals with extensive shopping and entertainment arcades. The first commercial zone will be Dubai Logistics City, located adjacent to the airport operating area and next to the Jebel Ali Free Zone.

A fully-integrated multimodal platform covering nearly 10 square miles, Dubai Logistics City (DLC) is designed to eventually support an annual air cargo capacity of 12 million tons annually—over three times that of the current world leader, Memphis (3.7 million tons in 2006). DLC will also operate as a free trade zone and offer the complete complement of logistics, transportation and supply chain management services. An express light rail system and dedicated road network will link DLC to Dubai International Airport 40 kilometers away via a special customs-bonded highway and railway.

Dubai Logistics City tenants will include light manufacturers and assemblers, importers, exporters, freight forwarders, third-party logistics providers and other companies requiring air cargo services and complex supply-chain management. By early 2007, more than 80 regional and international operators have reserved in excess of 26 million square feet of DLC land, including such logistics heavyweights and Kuehne + Nagle, Danzas, and Panalpina.

In DLC, logistics service providers can operate (1) within flexible shared facilities, such as DLC shared forwarder warehouses and offices, (2) within self-built or turnkey multi-client facilities on a DLC long-term lease, providing large-scale multimodal and logistics services, (3) within facilities dedicated to contract logistics services defined by key customers, or (4) a combination of the above scenarios.

DLC tenants will also benefit from a custom-designed, dedicated road system that separates professional cargo flows from public traffic, exclusive access to terminal facilities and the freedom to choose whether to break and build air pallets in-house or to outsource handling to third-party service providers.

DLC is thus designed as a highly efficient location for logistics service providers to meet their local and regional business needs. Air cargo from the existing Dubai International Airport will be linked to DLC via a bonded and professionally operated shuttle service. This scheduled resource will operate round-the-clock, several times an hour, delivering cargo directly to the heart of the DLC business community.

In addition to logistics and distribution service providers, Dubai Logistics City is targeting manufacturers and suppliers of high-tech and electronics, pharmaceuticals, health care and life sciences, consumer goods and fashion, spare parts and after-sales services, and disaster relief aid facilities.

Tenants can build their own customized facilities on DLC land under long-term lease and establish dedicated operations, such as distribution centers and regional head offices to manage their core business. Alternatively, tenants can establish themselves in advanced business units provided by DLC such as distribution centers, light industrial units and offices. Operations can also be outsourced to contract logistics companies and even manufacturers.

Along with Dubai Logistics City, other airport city components of Dubai World Central will include (1) Commercial City which will be Dubai World Central's business and financial hub with more than 85 towers ranging from six to seventy-five stories in height and expected to employ around 130,000 people, along with up to twenty-five hotels, ranging from three-star to five-star deluxe, (2) Enterprise Park targeting advanced materials manufacturing and the home of research institutions, conference venues, pavilions, and a medium-size science park with its own specialized university, and (3) Residential City to house up to 250,000 people in a mix of two-story villas and luxury apartments in blocks reaching up to twenty-four stories in height. Residential City will also include three hotels, an international school, medical facilities, and a large shopping mall.

The Dubai World Central is still largely plan and vision but it is based on an already successful airport-airline partnership that provides access to some of the most rapidly growing emerging economies. The benefits of airport scale, combined with Emirate's low unit operating costs suggest that Dubai will continue to affect transport and economic geography. The old and new airports are both central to Dubai's strategy to maintain prosperity in a post-oil era.

#### *Hong Kong International Airport*

Further east, Hong Kong International Airport (HKIA) provides another strong contrast to Schiphol. Long after Hong Kong's older airport, close to the city center was judged too small and too dangerous, its 1,258 hectare (2,700 acre) site was created by leveling two small islands and reclaiming land from the sea. The airport opened in July 1998 with a total project cost of US\$20 billion, including a 26 miles multi-lane expressway and modern airport express train to Kowloon and Hong Kong Island.

HKIA was part of a carefully-considered strategy to aid Hong Kong maintain its urban position and economic function in post-handover China. Without the superior infrastructure, firms might have slowly migrated to the mainland, diminishing Hong Kong's prosperity. The Chinese government has now learned to accept continuing Hong Kong prosperity.

Three commercial districts adjacent to or near HKIA's terminal and runways are well along in development. The 70 acre South Commercial District is composed of logistics facilities, including (1) Tradeport Hong Kong Ltd., constructed and operated by an international consortium of Asia and European Partners, (2) HACTL's Super Terminal 1 (the world's largest stand-alone air-cargo and air-express facility with a gross area of 2.7 million sq. ft), (3) the 2 million sq. ft. Asia Air Freight Terminal, and (4) a 1.4 million sq. ft. mixed-use freight-forwarding warehousing and office complex. DHL has just opened its Asia air express hub in this zone, as well, with Cathay City (a major aviation-linked office complex) developing nearby.

The 52 acre East Commercial District is being developed as an office park. It will have gross floor area of 3 million sq. ft. targeted to regional corporate offices and air travel-intensive professionals. The 125 acre North Commercial District is the Airport City's signature development zone, known as SkyCity. The 10 million sq. ft. commercial development is adjacent to the passenger terminal and served by the airport express train. SkyCity's master planner, Skidmore, Owings & Merrill, designed it as a commercial destination for working, shopping, meeting and trading.

SkyCity's first phase opened in late 2006, eight years after the airport opened, and contains SkyPlaza, a multipurpose commercial complex connected to the passenger terminal and the airport express train station. The lower floors of SkyPlaza provide a 300,000 sq. ft. retail center, including an IMAX 3D theater. Above this podium is class A office space with a total gross floor area of another 300,000 square feet.

SkyCity's first phase development also includes a 2 million sq. ft. international exhibition center (Asia World Expo) with full-time trade rep offices, a China cross-boundary ferry terminal, a 600-room hotel, and a 9-hole golf course that will go commercial in future phases. These future phases will consist of a business park, hotels, and leisure and entertainment facilities developed in a pedestrian friendly and public-transit integrated way. Another 500-room hotel opened last year adjacent to HKIA's passenger terminal, which houses 30 high-end clothing designer shops along with over 100 other retail, food and beverage, and service outlets.

SkyCity will be the multimodal Central Business District of a far reaching Hong Kong Aerotropolis. In addition to its Hong Kong Island and Kowloon connections, it will be linked by the express train and highway to the nearby Disney Theme Park that also opened on the airport's island in 2006, about 10 minutes from the SkyCity. The airport express train connects as well within 5 minutes to Tung Chung, a massive new town housing 45,000 airport workers and their families, complete with schools, churches, shopping and medical facilities.

SkyCity is also seamlessly connected through high-speed turbo jet ferries to the economically booming Pearl River Delta in southern coastal China. These high-speed ferries shuttle passengers, shoppers, workers, and tourists back and forth between SkyCity and key Delta locations in 30 to 40 minutes. Such connectivity to the mainland also exists from the South Commercial District where logistics ferries link

the District to the Delta's main manufacturing centers, shuttling parts and finished goods back and forth between the airport and the mainland.

Further integrating HKIA with both Hong Kong and the Delta will be a new expressway and rail bridge and tunnel linking Hong Kong to Macau and Zhuhai on the mainland. This combination express/rail bridge is planned to connect through the airport island (Lantau). It will not only enhance SkyCity's role as a destination for shoppers, tourists, traders and other business people from Hong Kong and Mainland China but also solidify HKIA's role as the multimodal nexus of a highly expansive and growing Hong Kong aerotropolis.

#### *Incheon: Korea's Air City*

Opened in March 2001, Incheon is another second generation airport built larger (15,000 acres) and further away from the city center. Like HKIA, Seoul's Incheon was also a component of Korea's strategy to remain competitive as a Northeast Asian cargo and passenger hub and thereby also remain an attractive site for manufacturing, producer services, and corporate headquarters. Incheon's airport city is, if anything, more ambitious than Hong Kong's.

At its core, Air City is a set of multimodal commercial complexes being developed with all the features of a modern metropolitan center: retail areas, office buildings, logistics and high-tech manufacturing facilities, ICT functions and leisure activities, a conference and exhibition center, as well as a mixed-use new town. Expressways, bridges and tunnels connect the airport to Seoul (42 miles to the North) and to nearby islands, the latter forming an expansive commercial and residential complex. A high-speed commuter rail line between downtown Seoul and Incheon International Airport is under construction.

Incheon's current master plan (with a 15-year horizon) has commercial and residential development evolving through three phases, creating an ever broadening and deepening urban expanse. The first phase (already complete) is an Airport Support Community consisting of airport-related industries (primarily logistics), commercial services, and housing for airport area employees and their families, which total 100,000. The second phase (in process) involves expanding (both spatially and functionally) the Airport Support Community while transforming it into an International Business City. Around the airport, a 360 acre international business center composed of four office complexes, a shopping mall, convention and exhibition facility and two five-star hotels opened this year.

An additional 220 acre commercial project under development is the Airport Free Zone. This international logistics and manufacturing zone became fully operational in 2006. Both the International Business Center and Airport Free Zone are planned to double in space in the coming five years with the population of Air City doubling, as well, to 200,000.

The third and most ambitious stage (The International Free Trade City) is a full-blown aerotropolis tied together by an extended international free enterprise zone (IFEZ). The IFEZ will encompass three islands, connected by expressway bridges (man-made Songdo and Cheongra, along with Yeongjong where the airport is located). A pivotal component in the Republic of Korea's plan to transform the country into the commercial and trading center of Northeast Asia, IFEZ is being promoted as "Pentaport"—a combined airport, business port, seaport, teleport, and leisure port.

Songdo Island will host the aerotropolis' second urban growth pole, New Songdo City, being created from scratch entirely on reclaimed land by Gale International of New York City and Posco (South Korea's largest steel producer) in partnership with the Korean Government with financing through Morgan Stanley, the World Bank, ABN Amro and Kookmin Bank. This 1,500-acre, \$20+ billion project is the largest private development project currently underway in the world. At full build-out in 2016, New Songdo City will have over 15 million square feet of office and commercial space, more than 9,000 residences (mostly condominium and town houses), a convention center, a cultural center, a central park greenway, an 18-hole golf course designed by Jack Nicklaus, a state-of-the-art medical facility, and an international school for children of expatriate workers.

Phase I of this mega-project commenced in 2005 and will include a 1 million sq. ft. retail complex, a 1,000 room hotel, a 65-story trade center, and 2,360 homes soon to be completed. As an incentive to its developers, the Korean government has agreed to construct a six-mile, six-lane bridge from New Songdo City directly to Incheon International Airport and provide all utilities.

Korea's population and economic activity are heavily concentrated in the Greater Seoul metropolitan area. New towns are an established pattern of spatial development. From the start of Air City crossing the airport property line to the development of New Songdo City six miles away, the Korean government is actively soliciting private-sector participation and foreign investment. Tax holidays and other generous financial incentives along with the provision of extensive infrastructure throughout the greater Incheon airport region are likely to catalyze considerably more private-sector development.

#### *Dallas-Fort Worth International Airport*

Opened in 1974, Dallas-Fort Worth International Airport is the second-newest major airport in the U.S. Only Denver International Airport, opened in 1995, is newer. In contrast to many airports stemming from the immediate post World War Two and earlier era, DFW has plenty of space. Its 18,000 acres (7,315 hectares) exceed the size of New York City's Manhattan Island. DFW itself is a product of the rapid expansion of U.S. air travel in the 1960s combined with the advent of commercial jets.

The rapid expansion made the U.S. Federal Aviation Administration reluctant to continue supporting the expansion of separate Dallas and Fort Worth airports that would eventually be inadequate anyway. The adoption of jet aircraft had two effects that increased the popularity of distant airports. First, jets roughly doubled the runway lengths needed in busy airports. Many metropolitan airports were surrounded by development and unable to expand sufficiently, prompting a spate of new airport construction. Second, airports suddenly needed additional buffer space as aircraft noise rapidly changed from a minor annoyance to a major community issue. Both considerations favored remote metropolitan fringe areas with lower land prices, making the larger airports financially viable, and little population, making the new airports politically viable. Given the then recent experience and the expectation of a coming generation of super-sonic transporters, DFW planners reserved space for the airport's runways to again be doubled in length.

Many of the expectations for air travel current in the 1960s and 1970s have not materialized. Given the new expectations, DFW Airport officials now plan to, over a period of 20 years, take advantage of the airport's vast size by developing over 5,000 acres that will not ever be used for aviation. DFW has worked with private firms in developing its property by leasing land. In addition to firms operating the

developed properties, the airport has also formed partnerships with commercial real estate firms such as Trammell Crow and air cargo oriented REITs such as AMB to construct “high velocity flow-thru” cargo facilities. Redico, a Detroit area real estate developer is now working on passenger-oriented facilities. These large commercial real estate companies not only have expertise in state-of-the-art facility development, but they also bring with them a rich network of potential tenants. Average lease rates per acre have risen from \$3,955 per acre in 1974 to \$23,896 in 2008.

Airport property development is now being concentrated in six areas of the airport. Two are for planned air cargo expansion (East Air Cargo, which has hundreds of developable acres, and West Air Cargo which anchors most current cargo facilities). International Commerce Park is targeted to light industrial, freeway commercial, and flex office development. It currently has 264 acres leased with 115 remaining for industrial/commercial development. A yet unnamed retail/hospitality/entertainment complex is planned on the northwest corner of the airport. Covering nearly 200 acres it will contain mixed use retail, restaurants, garden offices, a hotel and entertainment facilities. Bear Creek Office Park is a 1,800-acre tract with open space amenities being marketed primarily as a corporate campus site. Because of natural streams and floodplain in this park, substantial open space must be maintained. The land use plan thus calls for two 18-hole championship golf courses along with wildflower meadows and heavy tree cover. It is felt that this environment will be optimal for office development just minutes from the airport terminals, with desired open-space amenities. A small amount of light industrial and mixed use development may also be developed here. Passport Park is a 600-acre hybrid development at the southeastern end of the airport. Designed to be DFW’s southern gateway this mixed-use development is proposed to accommodate everything from big box retailers to supporting specialty retail and restaurants to light industrial and garden office development. In addition to a substantial amount of terminal retail, DFW has two hotels, the Hyatt Regency DFW and the Grand Hyatt. A third Hyatt is planned for Passport Park.

Long before Dallas-Fort Worth Airport began developing its own land, nearby land was being developed. Las Colinas, founded by Ben H. Carpenter in 1972, in anticipation of the airport opening, was one of the first real estate developments to use the airport as an anchor. This 12,000 acre planned airport-linked community in Irving, just east of DFW, now has 21 million sq. ft. of class A office space, 8.5 million sq. ft. of light industry, 1.3 million sq. ft. of retail, over 13,000 single- and multi-family residences housing 25,000 residents, 3,700 luxury and business-class hotel rooms, 75 restaurants, and two championship golf courses. Las Colinas hosts more than 98,000 employees, including those in four major Fortune 500 headquarters.

Dallas-Fort Worth belongs to an earlier generation of airport city developments than those of Asia and the Mideast. The airport and its location are the product, not of regional need, but of the intervention of the U.S. Federal Aviation Administration which was reluctant to invest Federal money in duplicate airports in the nearby cities. Ironically, the new airport partially undercut real estate investments such as the Dallas Market Center, opened in 1957 by developers Trammell Crow and John M. Stemmons, which was expressly located for easy access to the previous main Dallas Airport. The Dallas Market Center grew into the largest wholesale trade complex in the world.

### *Frankfurt International Airport*

Closer to home, Fraport is the most international hub in the world with 129 different scheduled airlines flying to 304 destinations in 112 countries. Every single day the airport handles over 140,000 passengers (54 percent of whom are transfers), 40,000 meters and greeters, 6,000 metric tones of cargo, 1,300 aircraft and 380 terminal-linked passenger trains (both short and long-distance). Frankfurt Airport opened in 1936 and was re-dedicated for commercial air service in 1955, having served exclusively as a military base for several years. It wasn't until 1972 that its importance as an air hub began to rise.

Its international hub status brings in tens of millions foreign passengers annually who eat, shop, and other participate in Fraport's upscale street-scapes of commercial establishments. These include 17 duty-free shops, 97 specialty retail stores, 52 food and beverage establishments, and 44 service establishments including a medical clinic serving 36,000 patients annually and a casino.

Because Fraport is surrounded by protected green areas on the one side and noise-sensitive communities on the other, it has been constrained in its outward growth. Fraport management has therefore had to be innovative in its approach to airport city development. It has therefore followed a strategy of commercial development based on the principles of best use and highest value, maintaining top international standards

Connected by pedestrian walkways to Terminals 1 and 2, respectively, are Frankfurt Airport Center 1 and 2. These 1 million+ sq. ft. complexes contain offices, banks, a 1,008-room Sheraton convention hotel with a 1,400-person congress center and an executive tower with all business services. The two airport centers office complexes are targeted to companies engaged in aviation and tourist-related businesses as well as for business meetings and trade shows. They are less than a five minute walk from the public section of the airport's terminals and to the local and regional commuter rail station under Terminal 2 as well as to the long-distance ICE train station with 174 daily connections throughout Germany and Western Europe – including Amsterdam.

The Airrail Center Frankfurt, currently under construction, above the airport's long-distance train station is a nine story complex more than two football fields long. With covered pedestrian access to Terminal 1, it will comprise nearly 2 million sq. ft. of class A office space, high-end retail, restaurants of all types, a wellness center and a Hilton Hotel with conference facilities. Airrail Center is scheduled to open in late 2009.

Near Airport Center is a development just getting underway called Gateway Gardens. This 3.5 million sq. ft. project is being positioned as a management hub and civic plaza for international business. Designed with cutting-edge architectural style Gateway Gardens will offer trend-setting corporate office buildings, hotels, restaurants and entertainment facilities with civic plazas and a central park. In addition to business offices and their supporting urban services, an International Trade Center with meeting and conference facilities is planned. Development, which is being financed through a public-private partnership including Fraport, is expected to be market-driven and incremental through projected build out in 2016.

The third major development, near the other end of the airport, is a 240 acre mixed-use project called the Mönchhof site. This site will be adapted to a range of commercial facilities from logistics companies to

large-scale retailers to airport-related enterprises and is being led by the real estate division of Fraport. Like Gateway Gardens, quality construction and aesthetics will be emphasized at the Mönchhof site.

### *The Schiphol Strategy in Context*

These particular airport-regions are only illustrative examples. The prevalence of airport-centered and oriented development is much broader and becoming more so. The “aerotropolis” or “airport city” model has been adopted, with some variation, in airport regions in the Middle East, Asia, North America, and Europe. A larger set of regions across all continents, including Latin America and Africa are developing airports following the models incorporated in these selected airports. The aerotropolis model may become the default development model for the newly developing and redeveloped airports of India. That is, passenger-oriented retail, integrated ground transport, and on and off-airport real estate development serving and supporting travelers and the shipment of goods are designed in at the beginning of the development process – not afterthoughts added in later.

The degree to and manner in which major airport operators themselves have become involved in land development on and near airport property differs substantially among regions. Sometimes, passenger and cargo service provision is the central concern. In some instances, airport revenue diversification is the primary motivation. In others, airports are targeted by regional authorities as actors that can act as economic development catalysts.

Schiphol faces many of the same opportunities and constraints as all large hub airports. It along with similar airports in Europe, North America, and the mature economies of the Asia Pacific region, face issues that are not universal. While many new and developing airports have the convenience of available surrounding space for expansion and development, Schiphol must compete with other potential land uses for aeronautical and non-aeronautical expansion. Airports view this as an issue of urban encroachment but it taps the larger issue of finding the optimal mix and pattern of land uses to maximize regional welfare broadly considered. In addition, Schiphol must compete with other developers for the airport-centered real estate opportunities that are part of that mix. The governance advantages of direct airport involvement in real estate development may diminish with distance from the terminal area, especially when many capable alternatives are available. We now turn to the roles airports (as business organizations) play in land and real estate development near airports (as physical locations) in selected regions. These experiences provide an informational background and international comparative basis for the Commission’s deliberations.

## **5. Roles Airports (as business organizations) Play in Land and Real Estate Development Near Airports (as physical locations)**

First and foremost it is clear that airports hold multiple roles in terms of the relationships they establish with stakeholders beyond the airport fence. The nature of these relationships ultimately affects the way in which land development is pursued close to airports. From a market perspective, airports provide an incentive for many businesses to develop close to, or on airport land. From a societal perspective this spatial attraction leads to higher land prices due to demand, while environmental impacts (such as noise) diminish the attractiveness of the standards of living in some areas close to airports. From a governmental perspective, airports provide national and regional access, stimulate growth, yet demand administrative capacities to manage land rights for new developments in both airport and municipal growth.

In some cases airports have been encouraged to develop land both on and near to airports when land has been scarce, whereas, in other cases they have been confined to airport-only investment under legislative frameworks. So while there is no normative 'direct' role that airports play in near airport land development, the relationships that airports create with their regions, at market and governmental levels, favour development, but leave the decisions of what to build in either the market or government's domain of authority. This appears to leave out public interests, so enhances the need for local governments to articulate the interests of their publics, and for avenues to be created and promoted for these interests to be considered. Failing to recognize these interests ultimately runs the risk of developing policy that contradicts the values held dear by the public. Should there be overriding values from regional or national levels, then these should also be communicated to the affected public, out of both transparency and fairness.

## **6. Lessons from *Asia Pacific* Airport Case Studies in the Protection of Public Values**

*Please note that for references to Commission issues refer to Appendix A.*

### **6.1 Introduction**

The major airports in Australia are privatized businesses operating on leased Commonwealth land. A tripartite Federal agency structure presides over aviation matters in Australia. Airservices Australia is a government-owned corporation providing safe and environmentally sound air traffic control management and related airside services to the aviation industry. The Civil Aviation Safety Authority (CASA) is commissioned with ensuring safe aviation, with the CEO reporting to the Minister of the Department of Infrastructure, Transport, Regional Development and Local Government (DITRD LG), which includes the Australian Transport Safety Bureau). The Department is responsible for approving all development at Australia's airports.

For the fifth year in a row, the aviation sector in Australia has grown at a faster pace than the overall economy. In 2007 the aviation sector expanded by 4.9 % to \$6.31 billion, which is equivalent to 0.62 % of Australia's GDP. This compares to a 4.2 % growth rate for the wider Australian economy. And over the last ten years the aviation sector has grown by more than 66 %, which compares favourably with Australia's national income growth of 42 %. This level of growth has created capacity, infrastructural provision and public interest problems.

The following case studies of land development-based issues at and near major Australian airports present potential lessons for both Australian and international airport operators and government decision makers engaged in or overseeing development in any way. It is argued that institutional arrangements for safeguarding public interest in airport and near airport locations in Australia potentially provide mechanisms or levers for managing both the implicit and the explicit impacts and ramifications of airport development initiatives. As such, the following case studies particularly focus on problems relating to the safeguarding of public values. In some cases, solutions have been found, in others they are yet to be found, and in some cases, the problems are yet to be acknowledged.

The much-cited Japanese against noise pollution at Osaka International Airport is also discussed. This case is significant in terms of the interpretation of public and private interest in Japan, and the way that solutions were found in this instance at least.

## **6.2 The case of Brisbane Airport, Australia**

Brisbane Airport is operated and developed by Brisbane Airport Corporation Pty Limited (BAC) under a long term (50+49 year) lease from the Commonwealth of Australia. BAC is part of a holding company group corporate structure, the ultimate shareholders of which are major Australian and international organisations including Amsterdam Airport Schiphol, the Brisbane City Council (BCC Economic Development Program), and significant institutional investors.

More than 130 businesses and nearly 8,000 people work at the Brisbane Airport site. BAC forecasts that more than 40,000 people will be working at the airport by 2025.

a)

<i>Context of Arrangement:</i>	
BAC is partnering with Port of Brisbane (a GOC), the Queensland Department of Tourism, Regional Development and Industry (DTRDI) and Brisbane Marketing through Invest Brisbane (a wholly-owned subsidiary of the Brisbane City Council - BCC) to develop the Australia Trade Coast (ATC). It is anticipated that there will be significant synergies created by this 'trade hub' in terms of planning, infrastructure delivery, infrastructure maintenance, and marketing.	
<i>Arrangement in place:</i> <b>The establishment of a trade and logistics hub: Airport partnering with a seaport and logistics providers</b>	
The ATC was established to drive inward investment and industry growth in the region. It utilises strategic government-industry partnerships to maximise existing and future anticipated transport-based trade and logistic infrastructure.	
<i>Aim</i>	<ul style="list-style-type: none"> <li>The ATC partners aim to establish a world-class, international gateway for business in Brisbane at a prime strategic location. The initiative is helping to protect and expand South-East Queensland's major export and import channels.</li> </ul>
<i>Effectiveness</i>	Potentially a highly effective gateway, with possible public failures related to the likely transformation of the 'gateway' into a 'must be located there hub', implying entrenched monopoly structures.
<i>Factors impacting effectiveness</i>	Local planning schemes and government infrastructure provision revolve around the aims of the ATC, tending to locally 'contain' activities that have hitherto been more widely distributed. This impacts on commuting and work force location issues, and the dependencies built up on existing entities that may have to relocate to the ATC in order to remain viable.
<i>Discussion and the Related Schiphol Issue(s):</i>  <b>1, 8, b and d</b>	<p>This arrangement addresses some of the concerns from issues b and d, in that the Commonwealth, State and Local governments are partnering with local public and private corporations to facilitate operational and development-based decision making on a very large parcel of land adjoining the airport quarantined for transport and trade hub-related activities. This relatively transparent arrangement helps to objectify and align the interests of the major actors such as the BAC.</p> <p>The ATC initiative provides a mechanism for airport and local kindred interests to be aligned and advanced. This ostensibly widens the shareholder interest in local and regional development, however the increasing importance of locating a private business in this precinct may lead to the emergence of benefit hoarding and an un-level playing field. The ATC structure arguably enhances the existing airside and seaside monopolies, which may have adverse impacts on businesses attracted to the precinct to 'remain in the game'.</p>

b)

<p><i>Context of Arrangement:</i></p> <p>The BAC partners with independent research providers for enhanced environmental outcomes made particularly acute by the airports location near the estuary of the Brisbane River which comprises sensitive mangrove and wetlands.</p>	
<p><i>Arrangement in place:</i>     <b>Environmental management as an integral part of master planning</b></p> <p>BAC is land rich (2700 ha total area) in a sensitive coastal location and comprises large areas of natural heritage value land, including mangroves and saltbush. The BAC updates its environmental strategy every 5 years, pursuant to which an extensive fauna and flora monitoring and reporting regime is undertaken.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• The environmental strategy specifically seeks to protect water quality and biodiversity, rehabilitate contaminated sites, minimise ground-based noise, preserve cultural heritage, report on pollution, develop management and operational systems, and find ways of reducing energy use.</li> </ul>
<p><i>Effectiveness</i></p>	<p>The strategy is a vital in-house check against the 20 year development plan for the airport. However, there appears to be a bias towards biodiversity and waste water run-off, which are the 'warm and cuddly' issues that have little impact on airport operations.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>Questions exist about the value of internal environmental strategy development. On the one hand, this positions the strategy close to decision makers, on the other, it places little compulsion on airport operators to act substantively.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p style="text-align: center;"><b>1, 4, 8, b and c</b></p>	<p>Developing and regularly updating an environmental strategy is a benchmark process for managing environmentally sensitive land. Environmental strategies do not in themselves safeguard public values. This is more a function of being independent and well resourced.</p> <p>The BAC's environmental strategy is a mechanism for ensuring transparency and progressive management of natural heritage.</p>

c)

<p><i>Context of Arrangement:</i></p> <p>Master planning processes include stakeholder and community consultation for investments in excess of \$10 million. It is an initiative to enhance the transparency and accountability of privatized airports.</p>	
<p><i>Arrangement in place:</i>     <b>A master planning process integrated with major development plans</b></p> <p>There is a national government directive to complete and publish a master planning document every 5 years, assuming continued development of airport land. The BAC has a 20 year development plan that includes a network of seven integrated and master planned development precincts occupying 1000 ha. It comprises Number 1 Airport Drive – a business, tourism, retail, entertainment and leisure precinct (80 ha), Export Park – international airfreight handling, commercial offices and warehouse and distribution facilities (280 ha), Aerotech Park –aircraft and aerospace production and maintenance hub (200 ha), Industrial Park – industrial precinct for wide ranging commercial use (100 ha), and Banksia Place – commercial office and aviation and industry support (210 ha).</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• The BAC master planning process claims to safeguard public goods against insensitive development.</li> </ul>
<p><i>Effectiveness</i></p>	<p>Over reliance on a master planning process which is more indicative than prescriptive appears to have some, albeit limited capacity to protect public values.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>How consultation is to be undertaken and the extent to which it is taken into consideration in the master planning process is unclear and under-regulated.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>1, 3, 4, 8, a, b and d</b></p>	<p>BAC's planned development makes little distinction between airport-dependent and airport-related business. What it does do is separate business type by location, with some business types more dependent and others simply related. There appears to be little government regulation of this development pattern beyond the master planning and its inherent consultation requirements. The businesses attracted to the airport assume the role of stakeholders, but appear to have little input into design and operational processes.</p> <p>The master planning process provides a framework for integrated planning and community consultation with a view to comprehensive advancement of development objectives ostensibly aligned with public values. The extent to which the master planning process establishes a level playing field is dubious. This is not a stated objective of the process, and seems to be antithetical to the clear aim of nurturing a competitive advantage. While evidence that the BAC master plans promote benefit hoarding is scant, benefits seem to be unequally balanced by the costs imposed on certain marginal interests.</p>

d)

<i>Context of Arrangement:</i>	
<p>Parking is increasingly a source of significant revenue for airport operators, and arguably there are monopolistic questions that emerge from BOOT (buy-own-operate-transfer) arrangements, particularly with public good providers. Originally, Brisbane Airport's only mode of access was via road transport, resulting in the development of parking lots for both short- and long-term parking. As the airport has grown, the need for improved access led to calls for public rail access. With neither the city council or the airport wanting to pay for the infrastructure, private money was sought for the development.</p>	
<p><i>Arrangement in place:</i>     <b>Parking as an important revenue stream: A BOOT arrangement with the developers of the 'Airtrain' - which was constructed on Australia's longest elevated viaduct.</b></p> <p>The DITRD LG has just announced approval for the construction of an 8-level car park on the existing ground-level car park at the domestic terminal of Brisbane Airport. This has occurred in the midst of growing public disaffection for the price of parking at the airport relative to CBD pricing, and the cost of privately delivered public transport – the 'airtrain' – relative to the public provision of train travel in the Brisbane metropolitan area.</p>	
<i>Aim</i>	<ul style="list-style-type: none"> <li>• Transport arrangements at Brisbane airport are clearly viewed as a further source of revenue making, despite the quality level of amenity provided.</li> </ul>
<i>Effectiveness</i>	The carparking provided at Brisbane airport is sufficient, and provision will likely keep pace with demand. The Airtrain is already showing signs of inadequacy (extra station/s) required.
<i>Factors impacting effectiveness</i>	The cost of parking relative to CBD and Airtrain services relative to metropolitan public transport will continue to ferment some public discontent. And the BOOT arrangement with Airtrain is likely to increasingly result in dissatisfaction from airport users with non-terminal destinations.
<i>Discussion and the Related Schiphol Issue(s):</i>  <b>2, c and d</b>	<p>When the construction of a train line to the international and domestic terminals was considered, factors such as the public expenditure and risk influenced the decision to take the privatised build, own, operate, transfer (BOOT) option. From a public value perspective, BOOTs are appropriate where public provision subsidises a subset of the tax paying public. However, where very large sections of the local population may use the infrastructure in question from time to time, BOOTs may not be entirely appropriate. The role of government is clearly to maximize and redistribute public goods, while private entities simply wish to maximize returns on their investment. This is acutely evident in the case of monopolized car parking and train travel at Brisbane airport.</p> <p>While some of the revenue generated by BAC from carparking is likely to feed back into improving benefits for airport users, the separate Airtrain company has no intention of feeding revenue back into development beyond basic maintenance. Clearly this is an example of benefit hoarding, which is simply normal business practice. While the BOOT arrangement is hardly short term (it is for 35 years from 2001), in the larger scheme of things it must be questioned that the market supplied in 2001 will hardly reflect market needs in 2036, particularly given BAC's extensive development plans (ie. there is already a need for an extra station at the DFO, but Airtrain has no plans to meet this need.</p>

e)

<p><i>Context of Arrangement:</i></p> <p>Objections to off-airport development that may compromise air safety are not necessarily upheld, particularly as the distance from the airport increases. Local Government has the power to approve development applications on non-airport land that Commonwealth airport interests object to on safety grounds.</p>	
<p><i>Arrangement in place:</i>     <b>Local government approves development that arguably compromises air safety: Airport's objection to highrise building rejected.</b></p> <p>The rejection of BAC's objection to the construction of a 79-storey skyscraper now under construction in the centre of Brisbane, which was branded a serious aircraft hazard by the Civil Aviation Safety Authority (CASA), calls into question development approval processes and the safeguarding of public interests.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• To highlight the need for an effective (independent) mechanism to safeguard public values outside of the expensive court system.</li> </ul>
<p><i>Effectiveness</i></p>	<p>The current system in which development interests are weighed up against rate-payer interests tends to marginalise third parties such as airport operators and other regulative bodies concerned with wider public safety issues.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>The relatively narrow band of interest of approving authorities needs to be widened in certain instances. If this can't be done explicitly through the charter of these authorities, there appears to be a role for independent adjudication outside the legal system.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>1, 2, 3, 9, 10, b and c</b></p>	<p>This example highlights the need for government to review arrangements for the development of non-airport land. There may well be grounds for the establishment of an independent tribunal to review objections based on public safety concerns. Whether in this case the construction of a 79-storey tower in the CBD actually constitutes a hazard or not, this case highlights the situation that airport operators and local authorities clearly have disparate interests that perhaps should be adjudicated independently in favour of public safety and amenity.</p> <p>Rather than showcasing a mechanism for articulating and aggregating public values, this example clearly demonstrates the need to create one.</p>

f)

<p><i>Context of Arrangement:</i></p> <p>Brisbane Airport has seen non-aviation related development increase in recent years, including a large retail shopping outlet. This brought forward local business concerns that the new retail development would impact their ability to continue operating. In 2005, the Federal Court of Australia rejected an application by Westfield, who had sued the Brisbane Airport Corporation (BAC) and the Federal Minister for Transport, seeking to limit commercial development at the airport under the <i>Airports Act 1996</i>.</p>	
<p><i>Arrangement in place:</i>     <b>The right to develop land for non-airport uses.</b></p> <p>Litigation brought forward by the commercial retailer/ developer Westfield against Brisbane Airport Corporation failed. Following the favorable Court decision and subsequent to the opening of a retail "Direct Factory Outlet" complex, the BAC continues to pursue its future development plans, which include a homemaker centre, golf course, convenience retail stores, child-care, health and fitness facilities, restaurants, cafes and hotels, corporate offices and car parking.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• The aim of the litigation was to halt the proposed commercial retail development in the first instance, and gain a clearer interpretation of the <i>Airport Act 1996</i> with respect to non-airport dependent and non-airport related development more generally.</li> </ul>
<p><i>Effectiveness</i></p>	<p>Allowing the claim by Westfield to be tested by the Courts demonstrates the pursuit of private interests by the BAC, but this may be too risky a strategy for government development interests.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>A high level of risk is associated with litigation, and any loss would have a significant impact on future airport development plans.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p>1, 6, 8, 12, a, b and e</p>	<p>The integrated approach to development pursued by the BAC clearly led to the litigation in this case, and the favorable result served to further entrench this approach. This would indicate that if airport operators are prepared to risk litigation against them, they may well end up with a very good result. However, if as in the case of Schiphol, government holds a major stake in airport development, this risk, and the accompanying public exposure, may prove to be unacceptable. To avoid litigation and thereby minimise any risk associated with airport development, government may choose to avoid any developments that will compete with existing businesses nearby.</p> <p>The litigation brought against the BAC was essentially based on an alleged un-level playing field. Specifically, the regulations imposed on the airport's commercial development were less stringent than those that existing similar developments in nearby non-airport land were subject to under the local Council.</p>

### **6.3 The case of Canberra Airport, Australia**

The Capital Airport Group (CAG) purchased Canberra Airport from the Commonwealth Government in 1998. At the time, the Airport consisted of an airport terminal, a general aviation precinct and the RAAF Fairbairn base. The CAG has since developed a business park which is arguably Australia's greenest business centre, and a retail and commercial centre. The former RAAF base has been turned into a commercial precinct and CAG has regenerated much of its heritage value. The total airport site now accommodates approximately 7,000 workers. A new passenger terminal is currently under construction and is due for completion in 2010.

a)

<p><i>Context of Arrangement:</i></p> <p>The Owners of Canberra Airport are attempting to take advantage of congestion, and a cap and curfew at Sydney airport in response to their noise problem by developing infrastructure in the hope of attracting freight distributors.</p>	
<p><i>Arrangement in place:</i> <b>Canberra Airport positioning itself as a freight hub and reliever to Sydney Airport through increased capacity.</b></p> <p>The capacity-building project will result in increased air traffic. The airport owners are positioning their argument as defending existing residents against increased noise, and as a provider of jobs and both airside and landside infrastructure such as airplane handling facilities roads, retail centres and the like.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>To provide infrastructure and amenity as means to bolstering both public and private interest.</li> </ul>
<p><i>Effectiveness</i></p>	<p>The outcome of this strategy is yet to be seen. Further litigation is not beyond the realms of possibility. Regardless, public opinion is likely to be split, but what this means in terms of public value implications is too early to tell.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>Canberra has a well informed and active citizenry. This issue is likely to be elevated to one of the most important to be debated locally in recent years. Media is likely to play an important role.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>1, 2, and c</b></p>	<p>The Canberra Airport freight hub proposal pivots on an interpretation of public values and is hinged to the favorable legal decision not allowing rezoning for residential purposes under the existing flight path. The airport owners argue that jobs and economic benefits flowing from the proposal outweigh an increase in air traffic, particularly at night, especially given the relative absence of residents impacted by overhead aircraft noise.</p> <p>The implications of the Canberra freight hub proposal are yet to fully play out, however it is anticipated that much of the debate will be centred on arguments about how to define public value, and how public values are compromised. This case is important to follow.</p>

b)

<i>Context of Arrangement:</i>	
The former Fairburn RAAF base, a heritage listed site, is an integral part of the Canberra airport. The challenge for the airport owners is to turn what some would see as a liability – the need to maintain heritage value – into an asset – undertake extensive renovation work far beyond requirements to generate a revenue stream and to label the operators as good corporate citizens.	
<i>Arrangement in place:</i> <b>Heritage listings restrict redevelopment opportunities.</b>	
Locked in to maintaining heritage values at the former RAAF base on airport land by legislation, the Canberra Airport owners have sort to restore, and where possible improve these values for both long term economic return and for business branding purposes.	
<i>Aim</i>	<ul style="list-style-type: none"> <li>• The aim of heritage legislation is explicitly to protect cultural and historic values.</li> </ul>
<i>Effectiveness</i>	Often see as a liability, heritage listing is only effective if owners and developers at least partially take up the vision of public value safeguarding
<i>Factors impacting effectiveness</i>	There are many ways and loopholes to squeeze through for developers to weaken the intent of a heritage listing. A sense of 'custodianship' is crucial.
<i>Discussion and the Related Schiphol Issue(s):</i>  1, a, b and c	<p>This extensive restoration project demonstrates how private ownership can at times exceed what is required of them by law in terms of safeguarding public values. Rather than resisting heritage conservation regulations, CAG has used the opportunity to brand itself as a good corporate citizen. The case demonstrates 2 things. When the distinction by between airport-related and airport-dependent business is relaxed, the scope for utility, and at least in this case, public value enhancement, can be increased. Second, the tight imposition by government on the maintenance of heritage values on airport land can force airport operators into using development and upgrading initiatives as a branding opportunity and win-win outcomes for both public and private interests.</p> <p>Heritage conservation legislation has in this case become an excellent instrument for the enforced protection of public values, forcing the owners to approach development from a heritage protection perspective.</p>

c)

<i>Context of Arrangement:</i>	
<p>Canberra is the rapidly growing political capital of Australia, and home to most head offices of the Commonwealth public service. Residential land needs to be found, and the largely rural land close to Canberra and lying under the southern flight path approach to the airport appears ripe for development. The battle between the protection of flight paths and urban development resulted in the court case <i>Village Building Company vs CAG</i>, as CAG had made efforts to prevent the rezoning of land to residential under existing flight paths.</p>	
<i>Arrangement in place:</i> <b>Court case to determine right to develop.</b>	
<p>The Canberra Airport owners successfully argued that the development of this land would lead to ‘noise sharing’ throughout Canberra (rather than concentrating the flight path within the existing corridor), resulting in diminished public value.</p>	
<i>Aim</i>	<ul style="list-style-type: none"> <li>• To highlight the need for an effective (independent) mechanism to safeguard public values outside of the expensive court system.</li> </ul>
<i>Effectiveness</i>	<p>The current system in which development interests are weighed up against rate-payer interests tends to marginalise 3<sup>rd</sup> parties such as airport operators and other regulative bodies concerned with wider public safety issues.</p>
<i>Factors impacting effectiveness</i>	<p>The relatively narrow band of interest of approving authorities need to be widened in certain instances. If this can't be done explicitly through the charter of these authorities, there appears to be a role for independent adjudication outside the legal system.</p>
<i>Discussion and the Related Schiphol Issue(s):</i>  1, 8, 12, a, b and c	<p>This example highlights the need for government to review arrangements for the development of non-airport land. There may well be grounds for the establishment of an independent tribunal to review objections based on public safety concerns. Whether in this case the construction of a 79-storey tower in the CBD actually constitutes a hazard or not, this case highlights the situation that airport operators and local authorities clearly have disparate interests that perhaps should be adjudicated independently in favour of public safety and amenity.</p> <p>Rather than showcasing a mechanism for articulating and aggregating public values, this example clearly demonstrates the need to create one.</p>

#### **6.4 The case of Adelaide Airport, Australia**

Adelaide Airport Limited (AAL) purchased the operating leases for Adelaide and Parafield Airports in May 1998, to operate both airports for the next 50 years with an option for a further 49 years. Adelaide Airport is currently the fourth largest domestic airport and sixth largest International airport in Australia. It is the aviation gateway to South Australia and processes in excess of 5.4 million passengers annually.

a)

<p><i>Context of Arrangement:</i></p> <p>Adelaide Airport together with the State Government and the City of West Torrens and surrounding local governments consult together on a regular basis and have formed a land use development plan (Airport Zone) that is viewed as complementing Commonwealth, State and Local Government planning regimes.</p>	
<p><i>Arrangement in place:</i>     <b>Multi-jurisdictional integrated planning</b></p> <p>The need to address disparate government agendas led to the development of an airport zone to co-ordinate development planning between multiple local authorities and the state and federal governments. The Airport Zone provides broad objectives and principles of development control to provide guidance to development proposed on the airport site.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• The aim of the initiative is to reduce conflict and improve development outcomes from a public interest perspective.</li> </ul>
<p><i>Effectiveness</i></p>	<p>So far the airport zone initiative appears to have worked well and appears to be complementary to AAL's master planning objectives.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>There is clearly potential for conflict emerging from transparent and consultative planning arrangements, however in this case, the goodwill developed from the initiative and the opportunity for local Council authorities to advance the interests of their constituents in a co-operative environment has served to safeguard public values.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>3, 6, 9, b, c, d and e</b></p>	<p>The airport zone planning initiative establishes a framework that facilitates co-operative and integrated planning with respect to airport and community interests. This is undertaken in a transparent and accountable way that ensures disparate and at times competing interests are brought to the table so that disputes can be resolved in a constructive manner and that various objectives can be aligned. The initiative highlights the different roles of decision makers, while focusing on interests in common, which ultimately revolve around public good outcomes.</p> <p>The planning mechanism developed does not enshrine the rights of the airport operators to develop according to their interests, but instead forces compromises and induces synergies between and across local jurisdictions, with a view to minimizing potential litigation.</p>

## **6.5 The case of Sydney Airport, Australia**

Sydney (Kingsford Smith) Airport (SACL) is Australia's busiest international airport handling over 29 million passengers a year through its 3 passenger terminals. The airport contributes nearly AUS \$6.6 billion towards the News South Wales gross state product, providing 62 000 jobs and a further 108 400 indirect jobs, which is about 8% of Sydney's workforce. The 5 freight terminals at the airport handle 550 000 tonnes annually. Being a busy airport close to residential communities, congestion and noise, and resultant capping and curfew policies limit further expansion.

a)

<p><i>Context of Arrangement:</i></p> <p>SACL receives as many noise complaints annually as all the other airports in Australia put together. Clearly, managing both ground and overhead noise at and near the airport has emerged as perhaps the most significant obstacle to further airport development in Sydney.</p>	
<p><i>Arrangement in place:</i>     <b>Dealing with noise complaints through increased transparency</b></p> <p>Airservices Australia has developed ways of disseminating noise information which has been instrumental in reducing complaints. The provision of a second airport has been debated for many years, but given the level of objection to this proposal throughout the greater Sydney area it is unlikely that these plans will proceed for many years.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• The aim of the noise and complaint tracking modeling is to provide accurate information to the public.</li> </ul>
<p><i>Effectiveness</i></p>	<p>The regime has been effective in terms of reducing complaints and helping to manage (rather than suppress) public debate about aircraft noise, congestion, capping and curfews.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>This initiative does not actually reduce noise, but generates benefits for the airport operators based on the power of reliable and transparent information. There is of course the prospect that over time this information can be used against the airport to serve the interests of those residents disturbed by noise pollution.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p style="text-align: center;"><b>2 and c</b></p>	<p>Noise is a universal problem for airport operators around the world. SACL, in cooperation with Airservices Australia has developed an aircraft tracking, noise monitoring, information dissemination system over many years that is resulting in improved community acceptance and reduced complaints. Essentially, SACL has found that the community wants to be informed above all else. Simply, when information is readily available and easily understood, the grounds for complaints are diminished.</p> <p>The data modeling system developed for Sydney airport and now applied to all of Australia's airports has helped to expose the noise issue and has correspondingly taken a good deal of heat out of the debate around it. This service clearly helps the public to make decisions in their interests, and thereby safeguards public values to the extent where this is possible in an environment hostile to the development of a second reliever airport.</p>

b)

<p><i>Context of Arrangement:</i></p> <p>While the regular master planning processes required of Australian airport operators assumes approval in principle of expansion plans, in this case where an application was made by the operators of Sydney Airport to build a shopping mall and associated works were rejected on the grounds that it was detrimental to public interest.</p>	
<p><i>Arrangement in place:</i>     <b>Planning controls on airport land exerted by Federal Government</b></p> <p>The Federal Government (DOTARS – now DITRDLG) rejected non-core airport business development – retail and office development application at Sydney Airport. This case demonstrates the independence of the federal agencies commissioned to safeguard public values that may be compromised by airport development. In this instance, the Commonwealth rejected a proposal to develop a large retail centre located near the end of 3<sup>rd</sup> runway on security safety grounds for shoppers. Extra traffic congestion was also cited as problematic.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• The aim of Commonwealth retention of airport land title is implicitly to enhance the safeguarding of public interest against unscrupulous behaviour or proposals by the lessees in certain circumstances.</li> <li>• It divests the activity of development to private interests, while retaining public interests as central.</li> </ul>
<p><i>Effectiveness</i></p>	<p>In this case, the rejection of the development proposal demonstrates that federal government does take its responsibility as the ultimate agent for approval seriously.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>The will of the federal government to intervene with respect to development applications is likely to depend on the ideology of the government in power and the minister in charge. While this case creates somewhat of a precedence, there is no compulsion on government to repeat this intervention on future development applications.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p style="text-align: center;"><b>1, 5, and c</b></p>	<p>This case demonstrates that while the major Australian airports have been fully privatized, the Commonwealth retains firm control of their development, particularly in terms of non-essential, non-airport related development proposals. This distinction between airport-dependant and non-airport related development is important in terms of determining and protecting public interests. It emphasizes the priority of the former, and the importance of the relative merits of the latter in terms of achieving federal approval. The demonstrated level of independence is perhaps critical to future development applications that may be called into question.</p> <p>The safeguard of retaining freehold ownership in the hands of the Commonwealth while certain operative and development rights are divested to the lessee is effectively demonstrated in this case.</p>

c)

<p><i>Context of Arrangement:</i></p> <p>The Federal Government has established a consumer watchdog agency – The Australian Competition and Consumer Commission (ACCC) – to prevent non-competitive behaviour amongst public companies and corporations. In this case the ACCC demonstrates that it is able to act against non-competitive behaviour in the aviation industry.</p>	
<p><i>Arrangement in place:</i>     <b>Non-competitive behaviour regulated by the Commonwealth</b></p> <p>The right to deal exclusively with airlines was denied – <i>SACL vs Australian Competition Tribunal</i>. This showed a clear recognition of non-competitive behaviour. In this case, the Australian Competition Tribunal (ACT) overturned SACL's alleged right to negotiate access rights with airlines privately by upholding Part 111A of the <i>Trade Practices Act 1974</i>.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• The aim of the SACL was to maximise airside revenues based on bargaining power. How this directly impacts public values beyond conceptual principles is unclear.</li> </ul>
<p><i>Effectiveness</i></p>	<p>The important lesson in terms of public values is the demonstration of the effectiveness against powerful airport interests of the ACCC and the ACT, as entities commissioned to safeguard public values.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>The institutions safeguarding public interest are only as effective as the legislation they can rely on. This implies that robust review of legislation that applies to the dynamic environment of airport development is essential.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p style="text-align: center;"><b>12, c and d</b></p>	<p>Sydney Airport argued that it would be in the interests of all parties if negotiations with airlines were to continue on a commercial basis. Rather than looking at whether declaration would promote competition, the question for the Tribunal was whether access or increased access would promote competition. The 2 important points emerging from the case is that it was held that 'fully commercial' negotiations with airports are not possible, and there is no need for the ACCC to demonstrate there has been an abuse of monopoly powers to enforce open negotiation.</p> <p>This case upholds the principle of a level playing field, and demonstrates the reach of the national consumer watchdog to ensure it occurs. And as this decision was reached through legal process, all airports in Australia will be required to observe it.</p>

## **6.6 The case of Perth Airport, Australia**

Perth Airport is owned by Westralia Airports Corporation (WAC) and is Australia's fourth largest airport in terms of passenger traffic and is part of a 2,105 hectare estate with sufficient capacity to expand, with over 700 hectares available for a wide range of non-aviation property development. It has been estimated that all airport associated activities generate approximately \$2.2 billion a year, or 3% of the Gross State Product for Western Australia. Direct employment is estimated at 5,960 jobs and a further 16,800 indirect jobs flow from the airport activities. Perth Airport's primary aviation facilities revolve around a two runway system.

a)

<p><i>Context of Arrangement:</i></p> <p>The development application to construct a brickworks on airport land underwent significant scrutiny at the Federal level. A similar application on land controlled by the local municipality may well have received less scrutiny. The case demonstrates the capacity of the Federal Government to gain better environmental outcomes than what might have otherwise occurred if developed off airport land.</p>	
<p><i>Arrangement in place:</i>     <b>Federal planning controls of airport development</b></p> <p>The development of airport land for a contentious noxious industry – brickworks were approved on airport land with over 60 conditions imposed. BCG Brickworks were approved for the airport site with over 60 safeguards stipulated by DOTARS (now DITRDLG).</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• The aim of granting approval subject to an extensive suite of conditions was to bargain for the best possible public value outcomes, particularly in terms of pollution abatement, which may not have been possible to this extent in a different context.</li> </ul>
<p><i>Effectiveness</i></p>	<p>The outcome allowed the Brickworks owners to be seen as compliant to rigorous environmental oversight, while shoring up the image of the airport and the Commonwealth as a landlord and regulator that takes public values seriously.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>As per the SACL case mentioned above, the will of the federal government to intervene with respect to development applications is likely to depend on the ideology of the government in power and the departmental minister at the time. It should be understood that there is no compulsion on government to repeat this level of intervention on future development applications.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>1, 15, a, b and c</b></p>	<p>The recognition that a brickworks is totally unrelated to an airport’s core business was a leading factor in increased scrutiny for this particular development application. As a result, the conditions imposed on the development were perhaps more stringent than those that would have been applied if the location was outside airport land. The case demonstrates that just because the regulative environment for development on airport land is ostensibly less demanding than on neighboring land under the jurisdiction of local authorities, this may not translate into actual development approvals, particularly if the proposed business is a significant polluter and is unrelated to airport activities. The case highlights the potential for airports and airport development approval authorities to act as good corporate citizens and protectors of public values.</p> <p>As in the SACL case where a proposed retail centre was deemed inappropriate, the Brickworks approval demonstrates that significant gains in terms of public good outcomes can be negotiated through the system of federal approvals facilitated by the retention of title and operating as interventionist lessors.</p>

## **6.7 The case of Osaka International Airport, Japan**

Now known as Itami Airport and used mostly for domestic purposes because of its small size and its close proximity to densely populated neighborhoods, this airport was the focus of much community protest for more than 3 decades, following the decision to upgrade it to international standards in the late 1950s. The opening of the new Kansai International Airport on a manmade island off Osaka Bay in 1994 finally brought an end to the dispute.

a)

<i>Context of Arrangement:</i>	
<p>The interesting thing in this case is that the Japanese judicial system was required to rule upon the difference between public and private interest. The local community was forced to take various legal actions against the planning authorities, all with little success despite receiving favourable minority decisions. Finally an agreeable political solution in terms of increased compensation and the construction of a new international airport was found.</p>	
<p><i>Arrangement in place:</i>     <b>Judicial determination of public interest in airport contexts: Community protest over noise</b></p> <p>By majority decision, the Courts found that in modern society the need of many residents to fly to and from an airport in a reasonable close location outweighed the interests of those impacted by noise pollution. Thus, the need to fly was considered to be the public interest, while the disturbance was held to be private interest.</p>	
<i>Aim</i>	<ul style="list-style-type: none"> <li>• The aim of the litigation in this case was to resolve a dispute to the satisfaction of both the local community and the state.</li> </ul>
<i>Effectiveness</i>	<p>Neither the state, which was required to find a very expensive solution, nor the community, which for over 3 decades endured excessive noise pollution, was satisfactorily served through litigation. Eventually a political solution had to be found.</p>
<i>Factors impacting effectiveness</i>	<p>The legal processes were clearly hampered by development and wider economic objectives that were determined to be more important than local health and safety concerns.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p>1, 2, 4, 12, c, d and e</p>	<p>In most respects, this case study demonstrates what not to do to protect public values, although it does highlight the effectiveness of political solutions in the absence of harmonious institutional brokerage. On constitutional grounds, the Japanese Courts resisted ruling against the local authorities, although these grounds failed to stand up under reflected scrutiny, prompting reforms in the way public interest came to be interpreted. Specifically, the independence of the Japanese judicial system was brought into question. The result was that instead of minimizing litigation, it was extended over decades at significant public cost.</p> <p>Interestingly, mechanisms for articulating and aggregating public values did not evolve from the success of public management processes but from their failure. This would indicate that in modern societies, even those widely regarded as 'development states', public values will eventually steer decision making regardless of how the institutions of the state interpret them.</p>

## **7. Lessons from *European Airport Case Studies in the Protection of Public Values***

*Please note that for references to Commission issues, refer to Appendix A.*

### **7.1 Introduction**

Europe's major airports vary heavily in their relationships with government, from wholly government owned and operated through to joint-venture structures and corporatized airport companies. Even with this diversity, many of the issues raised from the Netherlands are also concerns for all of the airports involved in the European study for the Commission ROL, and interestingly the concerns were shared by airport administrators, local governments, and master planners alike.

Europe maintains a dense network of airports that provide for a highly competitive market of supply, and many regional growth strategies rely on their airports to provide them with ready access to the rest of Europe and the world. This combined need of airport competitiveness and regional growth underpin many of the relationships seen between airports and their associated governments, yet this mainly strategic level of coordination often overlooks the more local impacts on communities that are in close proximity to airports. This has the potential to ignore or place in jeopardy the public values associated with airport development and regional growth from strategic levels of cooperation and coordination.

Balancing coordination, authority and the protection of public values is difficult at best, yet some of the arrangements below show truly innovative thinking that goes beyond just what is good for airport and regional growth. The inclusion of environmental concerns, innovation and entrepreneurship, public space, and deliberative governance are all seen in different areas of Europe. Learning from these arrangements will hopefully lead to policies that improve the relationships between airports and their surrounding communities

## **7.2 The case of London Heathrow Airport, England**

London Heathrow has seen considerable attention with the development of its fifth terminal, and plans for a third runway in progress. There is considerable national legislation in place regarding all aspects of airport land development, and while municipal governments are consulted in planning processes there is general consent that these arrangements lead to typically adversarial processes that involves an inspector (or inspectors) hearing arguments from both promoters and objectors for new development. This system has seen large inefficiencies in the development of new policies, with London Heathrow's fifth terminal taking some 42 months to deliberate over arguments for and against the development. To remedy this, a new Planning Bill is currently under discussion within the British Parliament.

a)

<p><i>Context of Arrangement:</i></p> <p>London Heathrow Airport is bounded by urban development, so any expansion or change in operational capacity will have immediate effects on land owners adjacent of the airport. To ensure the national goals of mobility and competitiveness are maintained, legislation exists to allow for continued expansion through compensation of land owners affected by any growth in the airport.</p>	
<p><i>Arrangement in place:</i>     <b>Land acquisition for new airport development</b></p> <p>National legislation mandates that approved airport development or expansion that requires the resumption of land (be it for physical need or from impacts of noise) has the compulsory right to that land after just economic compensation. This ensures that market rates for any land required is paid in full, however there is no option for the existing owner other than to 'hand over' the land.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• To ensure airport expansion has access to land at the time of expansion without the need to reserve land for the future.</li> </ul>
<p><i>Effectiveness</i></p>	<p>While this arrangement is effective for airport expansion, it does not appear to address the social costs of displacement, as compensation is for the market value of the land only. Regardless of the system's transparency the local governments feel that this is a 'taking' of land rather than a fair acquisition. This lack of support has led to a new planning process being considered currently in Parliament.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>The national authority backing this process is the foundation for its ability to operate, however its inability to address local public values is of core concern to the processes general acceptance.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>12, 14 and e</b></p>	<p>This policy provides that land may not necessarily be reserved for airport use as it can be resumed at a later time when expansion is necessary. As the approval process is heard locally, but mandated at a national level, there is little or no room to argue against the decision for resumed land, mitigating court cases. This also highlights a lack of integrated spatial planning, as decisions are largely single-sided</p>

### **7.3 The case of Ülemiste (Tallinn) Airport, Estonia**

Tallinn is the home of Estonia's largest airport, with current expansion projects adding service capacities to accommodate the 14% annual growth in airport traffic since the late 1990's. In response to this growth, regional development plans have included the zoning of a knowledge industry park close to the airport. This development has the dual aims of enhancing airport driven economic growth, while mitigating the likelihood of future noise complaints from residential expansion.

a)

<p><i>Context of Arrangement:</i></p> <p>Tallinn had seen considerable growth in air-traffic as the region became increasingly prosperous from new business investment, which in turn led to increased spatial demand for both residential and commercial development. Expanding towards and around Ulemiste Airport, city planning faced new concerns of how to utilize available land with consideration for the regional economic growth plans. Growth in airport-traffic also meant that some land parcels close to the airport were no longer (or soon not to be) acceptable for residential use. Facing these concerns, an innovative strategy was developed to harness opportunities presented by the airport's proximity for commercial purposes, while mitigating future noise impacts on residential development.</p>	
<p><i>Arrangement in place:</i>     <b>Utilizing industries that benefit most from airport proximity to develop industry clusters in noise affected areas.</b></p> <p>Hi-tech industries benefit highly from their proximity to airports due to the inherent mobility required to gain and transfer tacit knowledge from distant sources. Realising this, the municipal and regional governments have agreed to encourage the development of a hi-tech industry, business and education park close to the airport, and have been careful to make use of areas that are affected by noise, reducing future residential demand encroaching into areas under busy flight paths.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• To safeguard future residents from noise issues</li> <li>• To enhance regional economic growth synergies of airport-benefitting industries and near airport space</li> </ul>
<p><i>Effectiveness</i></p>	<p>Tallinn has attracted many entrepreneurial start-up firms and other mature firms looking for new investments in hi-tech firms since 2005. Tallinn University of Technology works closely with many of the firms in the cluster, with research spinoffs and incubators common in the area. This is seen as a contributing factor to Tallinn's attraction of 80% of the nations foreign direct investment, and is also responsible for 50% of the country's gross domestic product (2005). The success of the strategy has led to new plans for two additional industry clusters/incubators for the near future.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>The city of Tallinn has shown considerable leadership in the development of regional growth strategies, and encouraging new businesses to the newly developed knowledge incubators through strong ties with the Technical University of Tallinn. The availability of seed capital for startup firms has been seen as an issue for further stimulating growth, however a new national government strategy has just been established to address this issue (Estonian Development Fund).</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p style="text-align: center;"><b>2, a and b</b></p>	<p>By placing organizations that benefit the most from proximity to the airport in otherwise socially undesirable locations, the social costs of aviation and aviation related industries are safeguarded from negatively impacting residents. This is an insightful way of utilizing land close to airports, ensuring that social costs are burdened by airport related firms, and not by the public. This arrangement clearly shows long term strategies and consideration by appreciating future growth in both local residential, and regional economic development, but is not necessarily reliant on collaboration with the airport to make this arrangement successful.</p>

#### **7.4 The case of Barcelona Airport and Girona Airport, Spain**

The Spanish airports sector is almost entirely nationalized, with only a small number of airports small airports being privately owned. The nation's aviation sector is overseen by the industry independent regulator, Aena. This organization has the role of overseeing almost all aspects of aviation other than airline operations, including airport administration, planning and development, the setting of flight paths, negotiating aviation related issues between governmental agencies and airports, etc. While the agglomeration of aviation related authority has been cited by the EU as too monopolistic, different municipalities react and relate differently to decisions made by Aena, as seen in some of the arrangements below. Trends in data collected from key informants leads that it is the formal negotiation process built in to processes for change that allows many of the positive arrangements and outcomes to be gained. Conversely, this also implies that without negotiating power there may also be negative agreements for one or all parties involved.

Recent expansion at Barcelona Airport has included the building of a third runway in response to growing capacity demands, and the reduction of effective capacity of the North-South runway due to noise complaints from the airport's municipality, Prat. Negotiations between the nearby municipality and the national airports regulator, Aena, saw a number of interesting and innovative outcomes that address issues of future municipal growth, protection of the local economy, noise abatement, the protection of public space, and initiatives to improve the relationships between the airport, the municipality, and the environment.

a)

<p><i>Context of Arrangement:</i></p> <p>Noise complaints from the Municipality of Prat have been common for Barcelona Airport, particularly for the use of its North-South runway. Both the airport, and the city of Prat have agendas promoting growth, but their geographical proximity leads to each competing to achieve their own goals. With no authority to relocate one another, both parties have realized that there is a need to 'get along' with each other for the sake of productivity, leading to many negotiations over current issues rather than fighting over decisions in court.</p>	
<p><i>Arrangement in place:</i>     <b>Airport ownership of noise effected land to include the development of public space</b></p> <p>Land close to the airport has been zoned as residential for future growth, however the area immediately beyond the end of the runway is unusable for residential due to the high level of noise during air operations. As compensation to the municipality, the airport was lobbied to purchase the noise affected land, with a negotiated condition that the land could also be developed, but only for public use, such as parkland.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• To ensure the future expansion of the municipality does not lead to increases in noise complaints</li> <li>• To ensure that the costs of aviation on the community are compensated beyond short-term, monetary compensation</li> </ul>
<p><i>Effectiveness</i></p>	<p>The immediate and long term benefits of the arrangement appear clear enough, the costs to the airport are initially high but future costs associated with complaints are expected to offset this investment. The true effectiveness of this arrangement is yet to be seen, as the municipality is still to grow and land yet to be developed, however both parties appear satisfied, particularly the municipality, who have negotiated a number of other agreements with the airport for similar arrangements highlighted later in this report.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>Airport regulation requires new plans to be discussed with the affected municipalities. It was during the planning process for the new third runway that allowed discussions of existing noise issues to be 'put on the negotiating table' and settled without litigation. This arrangement required considerable negotiation between the airport and the municipality, so it is the ability of both parties to look beyond the short-term issues of noise and monetary compensation to the broader issues of growth and welfare.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p style="text-align: center;"><b>1, 2, 8 and b</b></p>	<p>By agreeing to purchase the noise affected land and to develop it as public space, the municipality is economically compensated for its loss of potentially residential space, without completely losing the utility of the land to the airport (i.e. if the land was 'reserved'). This has a long-term benefit for the community as its protection from excessive noise is guaranteed, without losing the physical value of the land. Airport ownership ensures that the land cannot be used in by the municipality in a way that may lead to more noise complaints.</p>

b)

<p><i>Context of Arrangement:</i></p> <p>Both the airport, and the city of Prat have agendas promoting growth, but their geographical proximity leads to each competing to achieve their own goals. The local beach for the citizens of Prat lies between Barcelona Airport and the sea, so any reclamation of this land removes a natural asset that contributes to the quality of life for Prat's community. Recent development of Airport infrastructure has brought forward this issue.</p>	
<p><i>Arrangement in place:</i>     <b>Protection of public space and environment on airport land</b></p> <p>The original plan for Barcelona's third runway was to reclaim the beach in front of the airport, effectively building over the top of the beach that is used by the residents of Prat. Negotiations between the municipal government and Aena resulted in an agreement to shift the runway back from the coast. This resulted in the runway being shortened to accommodate natural habitats at either end of the new runway location, with an agreement to maintain community beach access, and the development of a marine hospital/sanctuary for the welfare of the local marine environment.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>To ensure that the costs of aviation do not outweigh the negative effects on community and environmental welfare</li> </ul>
<p><i>Effectiveness</i></p>	<p>The process of negotiating public space and environmental concerns into the runway development plan shows a clear ability to consider impacts on both the community and the environment. The municipality is satisfied with the outcomes and residents continue to use the beach. The marine centre is planned to act as an attraction for the community and visitors, further engaging the airport's commitment to the community.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>The political background of the municipality is likely to have played an important role in highlighting environmental concerns, as the governing party is 'green'. This is supported by the municipality's willingness to engage with experts from around the globe in formulating their negotiation plan, providing highly detailed, scientific documents to support their arguments for adjusting the proposed runway plans.</p> <p>Developing the new runway in close proximity to natural wetlands has increased the possibility for bird-strike, however benchmarking to 'world's best practice' in has enabled the airport to reduce the risks within aviation safety standards.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>1, 2, 8, 13, b and c</b></p>	<p>In protecting this space from runway development, public recreational space and environmental protection interests have been preserved, ensuring that the costs of aviation are compensated for, and do not result in strong community opposition. The proposed development of the marine hospital also ensures equity to the environmental impacts of the airport encroaching on nearby natural habitats. The negotiation process has allowed the values of the public to be communicated and appreciated in airport planning, ensuring that airport land is used effectively and efficiently. The development of the marine hospital also helps to tie the airport to its surrounding community, showing consideration for the relationship that the airport inevitably shares with its surrounding stakeholders.</p>

c)

<p><i>Context of Arrangement:</i></p> <p>Local economies have cited that businesses on airport land may detract from the sustainability of local businesses. In response, local governments have lobbied to protect their local economies from new businesses establishing themselves on airport land. The result is an arrangement that allows new businesses to enter that also benefits the local community through improvements in employment and increased markets.</p>	
<p><i>Arrangement in place:</i>     <b>Shared municipal government and airport agreement on access of businesses into the 'airport city'</b></p> <p>This is an agreement between the municipal government and an industry independent regulator (Aena) to share and plan in the development of the airport city land. Decisions on which businesses are allowed in is based on a 'best for the airport AND the region' basis.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• To ensure that businesses in close proximity to the airfield will benefit the municipality as well as the airport in that location</li> <li>• To reduce possible tension between government agencies over commercial interests of the airport and the municipality.</li> </ul>
<p><i>Effectiveness</i></p>	<p>Highly effective, with no noted failures.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>Legislation is the underpinning structure of regime stability in this case. This structure is supported by a shared level of understanding between AENA and the surrounding municipal governments; airport actions can impact the region, but also the region's actions can impact on the airport. The legislation provides a forum for airport decision making to include direct regional input, the understanding held by both the region and the airport allows for productive negotiations, rather than 'stalemate' arguments to be the outcomes of the forum.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p>3, 4, 9, 12, b and e</p>	<p>This arrangement also addresses some of the concerns from issues b and e, in that it enables a higher level of transparency horizontally amongst actors, mitigating disconnected roles by including other stakeholders directly in making decisions. This mechanism provides a forum for national (airport) and local (equity) interests to be discussed and acted upon, protecting against 'uneven playing fields' by ensuring that the entry of private businesses are not without oversight within the airport city. This also mitigates benefit hoarding through this oversight, as benefits are aimed at both the airport and the region. The result of the mediated decision making process is a reduction in commercial tensions between the municipality and the airport, with the potential to reduce litigation.</p>

d)

<p><i>Context of Arrangement:</i></p> <p>Aena is an independent government agency that aims to integrate local, regional and national government concerns for aviation into a centralized authority for decision making in aviation. The organization has the responsibility for making decisions regarding development, expansion, planning, air-safety and flight paths – it is unique in how much control it has over the aviation concerns for a single country. After disputes arose between residents and airports over flight noise, Aena was responsible for resolving the conflict, resulting in the following arrangement.</p>	
<p><i>Arrangement in place:</i>     <b>Public-Public Commission for setting day-to-day operations guidelines for airports</b></p> <p>Multiple levels of government and an industry independent regulator (Aena) come together to discuss alternatives for airport operations for scheduling and flight paths. A number of scenarios have been built for particular weather conditions to minimize the noise and safety effects on heavily populated areas surrounding airports.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• To reduce the impact of noise emissions and protect the local welfare and quality of life in residential areas close to airport flight paths.</li> </ul>
<p><i>Effectiveness</i></p>	<p>Reduces noise impact on residents significantly</p> <p>Reduced risk of harm from overflight of heavily populated areas</p> <p>Increased quality of life conditions by re-configuring pre-existing airport operations</p>
<p><i>Factors impacting effectiveness</i></p>	<p>Institutional factor: There is a shared understanding amongst the actors that protecting public safety is the core concern, and that regional development must appreciate that fact in its plans. While airports still sit external of the control of local and municipal governments, the ability to influence an airport's operations processes allows for airside impacts to be reduced in landside effects.</p> <p>The weather: On windy days the arrangements in place become unsafe for aircraft, so there are days where flights do go over heavily populated areas. This contributes to latent tensions between municipalities and Aena.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>1, 3 and 8</b></p>	<p>This arrangement mitigates post-development stresses, be it from airport capacity growth or residential encroachment. While this arrangement stops short of proactive spatial planning it provides a useful forum to connect previously isolated planning processes to highlight possible future problems as seen in arrangements between Barcelona Airport and the Municipality of Prat.</p> <p>This arrangement protects public safety, local welfare and quality of life through the effective communication and articulation of public values. This, however, is only a partial fix as it does not address concerns that residential land was developed under flight paths after the airport operations had begun, or vice versa, so at a procedural level there may still be a latent public failure.</p>

e)

<i>Context of Arrangement:</i>	
Relationships between private airports and local communities is not always friendly in nature, with some disputes arising over tall buildings approved for construction close to flight paths. To protect the safety of citizens and to protect the operational ability of airports, building codes have been introduced to limit the height of buildings based on their proximity to airport flight paths.	
<i>Arrangement in place:</i> <b>National height restrictions on buildings around airports / flight paths, overseen by an industry independent regulator.</b>	
This is a national level law imposed on local municipalities, and is overseen by an industry independent regulatory body (Aena). Due to the high level of government ownership of land around larger airports, this law is usually only needed for smaller regional and privatized airports.	
<i>Aim</i>	<ul style="list-style-type: none"> <li>To protect flight operations from the impact of short sighted agendas such as excessive land side building development.</li> </ul>
<i>Effectiveness</i>	Works well for the settling disputes for smaller and privatized airports around Spain, however the larger, nationalized airports rarely refer to this arrangement due to the more cooperative, direct relationships between local governments and government owned airports.
<i>Factors impacting effectiveness</i>	Legislation is the underpinning structure of regime stability in this case. This structure is supported by a shared level of understanding between Aena and the surrounding municipal governments; airport actions can impact the region, but also the region's actions can impact on the airport. The legislation provides a forum for airport decision making to include direct regional input, the understanding held by both the region and the airport allows for productive negotiations, rather than 'stalemate' arguments to be the outcomes of the forum.
<i>Discussion and the Related Schiphol Issue(s):</i>  8	This is an arrangement that mitigates decisions that favor more parochial, short-term goals to ensure that the impacts of building development are mitigated for airside operations. This is a mechanism for articulating and aggregating procedural public values such as transparency and openness, good governance, and ensuring that decisions are formulated in the best interests of the public.

## **7.5 The case of Munich Airport, Germany**

The airport regulatory framework in Germany is highly inclusive of all levels of government, with airport ownership and operations in Munich Airport run by a corporatized airport operator (Flughafen München GmbH – FMG) whose ownership is made up entirely of the national government (26%), state government (51%) and local government (23%). The airport plans to expand the airport's capacity with a third runway subsequent to a formal review process; this review process highlights some of the arrangements in place that protect the values of the public at national, state and local levels, with core emphasis on transparency, fairness, and enforcement of final decisions.

a)

<p><i>Context of Arrangement:</i></p> <p>Community protection is one of the strongest underpinnings of German society, so when an airport considers expansion that might impact on local communities and/or landholders, the public demands a fair process be followed in making any decisions. To ensure and demonstrate that decisions consider the entire community, legislation has been built around inclusivity and transparency</p>	
<p><i>Arrangement in place:</i> <b>Inclusivity, consideration, compensation and enforcement within airport expansion processes.</b></p> <p>Once the decision to build or expand an airport has been made by the national government, there is a general call for all interested parties to submit any grievances. Before the approval of the plans can be made, every grievance must be heard and considered by an airport independent administrator who has the authority to make decisions on appropriate measures for compensation or modifications to airport plans to ensure fairness amongst stakeholders. The inclusion of stakeholder concerns in airport decision making is not new, however the level of inclusivity and the process for addressing the public concerns are far higher than what is seen in many other systems globally.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• To ensure that public values have not only been heard, but acted upon before final plans for airport expansion or development have been approved</li> <li>• To ensure that airport placement or expansion is not unfair to stakeholders effected by the decision</li> <li>• To determine who is to be compensated, to what extent, and by whom</li> </ul>
<p><i>Effectiveness</i></p>	<p>While this process typically takes a long period of time (approximately 1-2 years), this in itself indicates the success for this process to capture the interests of stakeholders. In terms of fairness there are still a number of court cases that follow this process for stakeholders that feel that they have not received adequate compensation, even so, this shows that there is transparency and reciprocity applied to the process itself, further adding to the fairness of the system.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>The national legislation in place to protect the rights of the society is the foundation for this process to work. There is no exception given to the right to claim a grievance in this process, so ALL stakeholders who feel that they have a claim are heard, and provided an avenue through the courts if they feel that any compensatory measures decided upon were inadequate.</p> <p>Total transparency and fairness are the overarching ideals that make this process work. The fact that all interested parties are provided the opportunity for a formal hearing, coupled with decisions that must be acted upon before the final plan is approved, shows that the national government ensures the rights of the people are upheld under decisions made in the national interest.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>3, 9, 14 and c</b></p>	<p>By ensuring that the administrator sits autonomous of the airport and local and regional governments, a level playing field for actors is provided in a forum that is clearly made for aggregating and acting upon both the individual, and collective public values at stake in major airport expansion decisions. Regional and local public values are provided with an avenue to be heard and protected by the airport independent administrator, thus managing the tensions of each actors' independent interests, and ensuring fairness is upheld in light of national strategic decisions.</p>

b)

<p><i>Context of Arrangement:</i></p> <p>Similar to cases from Spain, there is an active decision making process in determining commercial development on airport land. Government ties to labor unions are quite strong, so the involvement of the local unions in this decision making process comes as no surprise for the German context. The pros of increased employment and economic growth are weighed against the cons of increased ground traffic close to the development and negative impacts on community businesses from new entrants. By including a diverse mix of actors in this decision making process, outcomes are more readily accepted by both airport and community stakeholders, and court cases appealing the outcomes appear minimal.</p>	
<p><i>Arrangement in place:</i>     <b>Supervisory board to screen real-estate development on airport property.</b></p> <p>A supervisory board made of national, state and local government representatives are joined by union and other stakeholder representatives convene over decisions relating to major airport developments such as shopping centers and hotel developments. Plans to develop land on the airport requires the consent of the supervisory panel, and they have the power to include hurdles to development such as placing limits on size or number of beds.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• To ensure that positive airport benefits from airport real-estate development do not lead to negative net results for the surrounding municipalities and regions.</li> </ul>
<p><i>Effectiveness</i></p>	<p>Airport real-estate development compliments the local and regional economies by ensuring that businesses inside of the airport fence are not directly taking business from the surrounding environ. Reviewing the wants of the airport and the region go beyond just employment and revenue, to consider factors such as increased noise and congestion from traffic that will impact local standards of living. In this way a balance is struck to ensure that any negatives are amply compensated by positives at a local and possibly regional level.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>The high level of inclusivity in the decision making process ensures that there is a representative set of interests in reviewing the airport development's potential to benefit the region (in terms of employment and improved growth). This inclusivity removes helps to appreciate the importance of the negative impacts of increased development. This transparency allows issues to be talked about openly with room to find alternative arrangements, rather than deadlocked disputes.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>1, 3, 5, 6, 7, 8, 9, and 12</b></p>	<p>This instrument shows clearly how real-estate development on airports can be managed to meet the commercial interests of the airport, while ensuring that local interests are protected or even benefited by new development. The aligning of decision making interests through true networked governance manages the tensions between different government goals, and provides transparency to all vested stakeholders. Commercial development on the airport therefore appreciates the local public values by acknowledging and integrating local needs, and reduces the likelihood of future conflict arising from decisions made.</p>

c)

<i>Context of Arrangement:</i>	
<p>The relationships of prime air-carriers and airports are typically close, and often collaborative in nature. Despite the existing close ties between airports and airlines, as competing airports expand their available capacities the disincentives for airlines to relocate increases. Munich airport's joint-venture with Lufthansa can be seen as a strategy to ensure that both parties appreciate the others' long-term goals and expectations of their shared relationship, effectively 'locking-in' both parties for a set period of time.</p>	
<i>Arrangement in place:</i> <b>Binding prime air-carriers to airports through sharing infrastructure development</b>	
<p>Lufthansa and Munich Airport built a new terminal as a joint-venture for the exclusive use of Lufthansa flights. This investment shows the strength of the relationship between the airport and the carrier, and effectively binds the two organizations together due to the level of sunk costs in such a development; both share in strategic advantages by confirming of their long-term intentions.</p>	
<i>Aim</i>	<ul style="list-style-type: none"> <li>• To build expand capacity through infrastructure without assuming all costs and risks</li> <li>• To solidify the relationship between the airline and the airport to ensure mutual benefit from long-term cooperation</li> </ul>
<i>Effectiveness</i>	<p>It is debatable as to whether a terminal was needed to retain Lufthansa as the prime carrier due to the general shortage of terminal availability within Europe, however the sunk costs involved now ensure that any possible interests of moving the prime carrier away from Munich are non-existent.</p>
<i>Factors impacting effectiveness</i>	<p>Prime carriers for airports are typically retained through good working relationships between an airport administrators and the airline. A core factor that undermines the strength of any relationship is uncertainty of behavior. By sharing the costs and associated risks of airport development both parties not only appreciate each others' operational needs, but also symbolize their future intents in maintaining the working relationship. This effectively 'locks-in' the future cooperation of both parties, at least until the end of the contractual obligations of the joint venture.</p>
<i>Discussion and the Related Schiphol Issue(s):</i>	<p>Arrangements of this nature affirm the long-term intentions of both airline and airport, as both require long periods of time to recoup the costs of the development. Both airport and airline investing together provides disincentives for either party to change the nature of their existing relationship. Losing the sunk costs and convenience of exclusive terminal facilities provides a significant disincentive for Lufthansa to move elsewhere.</p>
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## **7.6 The case of Vantaa Airport, Finland**

Airports in Finland are nationally owned and operated, and have previously been considered by local and regional governments as sitting separate of the decision making process, seen as a 'state within a state' that had the power to make its own decisions with little or no opportunity for local and regional rebuttal to plans and development. Impacts from noise pollution and increased traffic on the ground were the main issues stemming from airport development. In the late 1970's legal platforms were installed to highlight the need to consider land use with airport planning due to impacts beyond the airport fence. This led to a shift in how airports were viewed in the 1980's, showing that airports provided more than just air services, noise pollution and traffic congestion; they provide opportunities for local businesses and regional development also.

These discussions, coupled with the legal platforms in place led to an increase in planning considerations to include airport impacts on their surrounds, particularly for the Airport of Vantaa as seen in the 1992 Master Plan. Discussions included noise abatement, environmental concerns, and the impact of airport ground traffic on regional traffic systems, and what this meant for future development.

a)

<p><i>Context of Arrangement:</i></p> <p>Vantaa Airport effectively services four surrounding cities, but the airport has traditionally been seen as a state within a state; making decisions for growth and development with very little input from the surrounding stakeholders. There are no formalized arrangements in place to improve coordination between the airport and its surrounding urban environment, yet there exist informal processes for the airport and surrounding cities to appreciate each others' long-term development goals, in an organization that is not directly related to the airport. In this way it is the concern of the individuals within the organization that promote the effective coordination of long-term planning goals to appreciate airport growth.</p>	
<p><i>Arrangement in place:</i>     <b>Coordinated planning amongst local governments that include airport consideration</b></p> <p>The four cities surrounding Vantaa Airport have a coordinated system for ground traffic planning, where future trends and needs for each of the four cities and the airport are discussed for coordinated planning between the cities. The mandate backing this coordination is to preserve service and accessibility for each of the cities, and due to the impact and proximity of the airport, also includes its consideration.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• To ensure that administrative boundaries do not ignore the functional borders of the region.</li> <li>• To coordinate ground traffic planning and management strategies for net, rather than individual, benefits</li> </ul>
<p><i>Effectiveness</i></p>	<p>The coordination seen here allows each local government to accommodate and adapt to airport development without confounding the others' attempts through otherwise isolated actions. Dialogue between airport and local planning has improved so that there is joint consideration between local governments and airports in development plans.</p> <p>While impacts of the airport have been considered to be regional, a lack of stronger coordinative functions to include airport impacts on a regional government level have left the local cities with the most influence over this coordinative role.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>The key factor to the success of this arrangement is the importance placed on regular contact between the decision makers, rather than isolated, ad hoc meetings when individual issues arise. In this way there can be a proactive, rather than reactive cycle of planning to appreciate the future needs of the airport and the area.</p> <p>While the primary purpose of the arrangement is for coordinated local government traffic planning, the identification of the airport both having effects on the traffic system as well as being a provider of regional benefits allows for a new institutional understanding: There are available opportunities to increase regional value through acknowledging the airport in planning.</p> <p>The initiators of coordinative transactions have typically been the local governments, however a major factor to the original success in dialogue between the airport and the local governments was the appointment of a new head of the nation's civil aviation authority. His background was in traffic planning so there was an inherent ability to share an understanding of airport impacts on surrounding systems with the local government planners.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p style="text-align: center;"><b>1, 3 and 8</b></p>	<p>The inclusion of airport discussion into the planning process allows for future development and expansion to be catered for, ensuring that infrastructure capacity is prepared to for increased demand, while the coordination amongst local governments provides a forum for discussing and protecting the local public values they are responsible for. Coordination amongst local authorities, and the integration of airport considerations in their traffic planning allow for local (accessibility and service) and regional (economic development) goals to be realized.</p>

## **8. Lessons from *North-American Airport Case Studies in the Protection of Public Values***

*Please note that for references to Commission issues, refer to Appendix A.*

### **8.1 Introduction**

Airports in the United States of America have seen a number of adverse reactions to airport and airline expansion throughout history. Airports had already seen significant residential development approach airport boundaries before the adoption of the turbo-fan engine startled the public, with a new era of noise and increased traffic. The relationships between airports and their cities have been adversarial in most cases, even hostile in some. Attempts to privatize and coordinate airports have met mixed responses, with some efforts repeated a number of times before finally leaving them to traditional centralized authority.

The airport cases below have been purposefully chosen to reflect the issues of real estate development, residential encroachment, privatization, coordination between airport decision makers, and integrated land use and planning policies seen within a North American context. While the analysis shows that there are still many latent issues for the cases, there are interesting and promising outcomes for the majority.

## **8.2 The case of Fort Worth Alliance Airport (AFW)**

Fort Worth Alliance Airport is a city-owned public-use airport located 14 miles (23 km) north of the central business district of Fort Worth, city in Tarrant County, TX. The airport covers 1,198 acres and offers two parallel runways. Groundbreaking ceremonies were held in July 1988, and the airport officially opened in December 1989. Fort Worth Alliance Airport covers an area of 1,198 acres (485 hectares). A cargo airport, Alliance is a cargo hub for FedEx Express (since 1997) and is a maintenance base of American Airlines (since 1989). The airport is owned by the City of Fort Worth and managed by Alliance Air Services, a subsidiary of Hillwood Development Company, a real estate development company owned by H. Ross Perot, Jr. The airport is, in effect, a joint venture between the City of Fort Worth, the Federal Aviation Administration, and Hillwood.

a)

<i>Context of Arrangement:</i>	
<p>Fort Worth Alliance is not so much an airport, as a real estate development. Former U.S. presidential candidate, Ross Perot, Sr., and his son had begun acquiring land north of Fort Worth during the early 1980s along Interstate 35, part of what is sometimes called the NAFTA Superhighway. A slowdown in the Texas economy in the late 1980s postponed development plans. Hearing about the FAA's plans for a new reliever airport for Dallas-Fort Worth International Airport (DFW), the Perots recruited Jim Wright of Fort Worth, then the Speaker of the U.S. House of Representatives to champion in Congress a far larger project than the Federal Aviation Administration had recommended.</p> <p>Because the airport needed to be publicly-owned and to have a government sponsor, the Perots donated the land to the City of Fort Worth, city annexed the property, and the land became the ten percent city contribution to the airport required by the FAA. The city also committed to bring water service to Alliance, which effectively opened up between 40,000 and 50,000 acres of land for development. Fort Worth also funded construction for a crash, fire, and rescue facility. The initial city commitment has been estimated to be approximately \$60 million. Federal, state and local governments provided more than \$375 million in cash and tax breaks for the airport and real estate development.</p>	
<i>Arrangement in place:</i> <b>Airport provides the crown jewel in a massive real estate development</b>	
<p>AllianceTexas, a 17,000 acre (3,885 hectare) master-planned development, surrounds Fort Worth Alliance Airport. The development (not all of which is contiguous with the airport) lies within four cities (Fort Worth, Haslet, Roanoke and Westlake), two counties (Denton and Tarrant) and two school districts (Keller ISD and Northwest ISD).</p>	
<i>Aim</i>	<ul style="list-style-type: none"> <li>• To boost the competitive attraction of the Perot's real estate holdings.</li> <li>• To provide the Dallas Region with a reliever airport.</li> </ul>
<i>Effectiveness</i>	<p>As the suburban frontier has approached, the development has thrived. The development now encompasses 29 million square feet of building space, 200 corporate residents (including 14 international firms and more than 65 premier U.S. companies), 28,000 employees and more than 6,700 single-family homes. AT&amp;T, Nokia, BFGoodrich Aerospace, Bell Helicopters, Gulfstream, Zenith Electronics, Nestle Distribution, and Dell Inc. are among the firms located at AllianceTexas. Less than one-third of the available land has been developed.</p>
<i>Factors impacting effectiveness</i>	<p>AllianceTexas is in the Dallas-Fort Worth northward development path.</p>
<i>Discussion and the Related Schiphol Issue(s):</i>	<p>The airport is actually just a part of a large multi-modal logistics hub that includes an inland port, Interstate highway connections, and two Class I rail lines with a Burlington Northern Santa Fe inter-modal hub. Handling more than 400,000 containers each year, the Burlington Northern Santa Fe rail yard receives goods from the ports of Los Angeles and Houston. The role of airports in firm location decisions is part operational but also part symbolic.</p>
<b>1, 8</b>	

### **8.3 The case of Boston General Edward Lawrence Logan International Airport (BOS)**

The Greater Boston region (defined as the Boston-Worcester-Manchester, MA-RI-NH Combined Statistical Area) spreads across parts of three states and touches two others. With a population of almost seven and a half million, it is the fifth-most populous region in the U.S. Due to its high income and economic base built on high-technology and other knowledge-intensive fields, the Boston region has a high propensity to travel by air (2.5 annual air trips per capita compared to 1.4 for the U.S. as a whole). The region's 48 million passengers are forecasted to increase in number to 70 million by 2020. Boston is the largest city and the central focal point for the region. Logan Airport, on 2,400 acres on Massachusetts Bay within one mile of central Boston, is the region's primary airport, serving nearly three-fourths of the region's passengers. Logan is one of the 20 busiest airports in the U.S. and its seventh-busiest international gateway.

a)

<p><i>Context of Arrangement:</i></p> <p>Expansion of Logan is hampered by limited land area. Community opposition has also been a significant factor restricting Logan's expansion. An earlier round of airport building in the 1960s and 1970s created a legacy of opposition. During the earlier expansion, nearby residents reportedly protested the airport's heavy-handed behavior by lying down in front of bulldozers to prevent the construction of what is now Logan's longest runway. The largely working class residents gained the sympathy of more well-to-do residents living further away in the flight path.</p> <p>The net effect of the history was that Logan Airport went without a major airside upgrade in more than forty years. When a new runway finally opened in 2006, its use was severely curtailed by the construction of a hotel a few hundred yards off the inland end of the runway. (The hotel's construction pre-dates the runway by more than a decade but it is frequently said to have been meant as a limitation on airport expansion and airspace use.) At 5,000 feet (less than one mile long), the uni-directional runway may only be used under certain wind conditions. Aviation issues continue to be contentious in Boston.</p>	
<p><i>Arrangement in place:</i>     <b>Regional Memorandum of Understanding (MOU) to distribute air traffic among airports</b></p> <p>Facing expansion constraints at their original airports, many other cities have established new, larger airports with the space needed for growing aviation demands. That option has been studied several times. Owing to the historical pattern of development in the Boston area, finding a suitable site has not been possible. The region has a history dating back to the 1700s of settlements in dispersed villages. These became the nuclei of suburban growth in the post World War Two era, severely reducing the feasible sites for a new and larger Boston Airport. After a last search for potential alternative airport locations in 1990, the Massachusetts Aeronautics Commission recommended the development of a network of regional airports throughout New England.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• Accommodate increasing traffic in an aviation-intensive region without increasing runway capacity</li> </ul>
<p><i>Effectiveness</i></p>	<p>Faced with little alternative, the Massachusetts Port Authority (Massport), an independent public authority which owns and operates Logan, Hanscom, and Worcester Airports and other infrastructure facilities, took the lead in promoting regional airports to relieve congestion at Logan Airport. Massport, in cooperation with a non-profit business association, launched a partnership with the governors from the six New England states and eleven regional airports and helped create the New England Airport Coalition with a legislative and marketing agenda. The Coalition is a cooperative venture of multiple airport authorities, state aviation agencies, an arm of the FAA, and the New England Council, the non-profit group that supported Massport's early efforts. The Airport Coalition was created by a memorandum of understanding (MOU). There are no bylaws and the participants meet on an ad hoc basis. The Airport Coalition is an informal agreement among interested stakeholders, not an operational entity. It has the power to discuss, but little more.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>The continued suburbanization of the region has worked towards critical mass at the two main alternative airports in Manchester and Providence for the northern and southern reaches of the region, respectively, as has the decision of Southwest, a prominent LCC, to serve both airports. The MOU has not been found to have an impact on the decentralization of air traffic.</p>
<p><i>Discussion and the Related Schiphof Issue(s):</i></p> <p>1, 8, 10, 11</p>	<p>The possibilities for the Netherlands to decentralize air traffic among several airports: Rotterdam, Lelystad, Eindhoven, and others is limited in the absence of significant concentrated markets in the immediate area of those airports.</p>

#### **8.4 The case of Dallas–Fort Worth International Airport (DFW)**

Opened in 1974, Dallas-Fort Worth International Airport is the second-newest major airport in the U.S. Only Denver International Airport, opened in 1995, is newer. In contrast to many airports stemming from the immediate post World War Two and earlier era, DFW has plenty of space. Its 18,000 acres (7,315 hectares) cover parts of four cities (Irving, Euless, Grapevine, and Coppell) and two counties (Dallas and Tarrant). Its land area exceeds the size of New York City's Manhattan Island. The airport is owned by the cities of Dallas and Fort Worth through a semi-autonomous body, The Dallas-Fort Worth International Airport Board, governed by twelve directors. Seven directors represent the City of Dallas and four represent the City of Fort Worth, in accordance with each city's ownership interest in the Airport. A final, non-voting, directorship rotates among the Airport's four neighboring cities (Irving, Grapevine, Euless and Coppell) annually. The owner cities maintain final approval power over the airport's annual budget, bond sales and other similar measures.

DFW itself is a product of the rapid expansion of U.S. air travel in the 1960s combined with the advent of commercial jets. The rapid expansion made the U.S. Federal Aviation Administration reluctant to continue supporting the expansion of separate Dallas and Fort Worth airports that would eventually be inadequate anyway. The adoption of jet aircraft had two effects that increased the popularity of distant airports. First, jets roughly doubled the runway lengths needed in busy airports. Many metropolitan airports were surrounded by development and unable to expand sufficiently, prompting a spate of new airport construction. Second, airports suddenly needed additional buffer space as aircraft noise rapidly changed from a minor annoyance to a major community issue. Both considerations favored remote metropolitan fringe areas with lower land prices, making the larger airports financially viable, and little population, making the new airports politically viable. Given the then recent experience and the expectation of a coming generation of super-sonic transporters, DFW planners reserved space for the airport's runways to again be doubled in length.

a)

<i>Context of Arrangement:</i>	
<p>Many of the expectations for air travel current in the 1960s and 1970s have not materialized. Super-sonic transport proved to be unviable, even on the busiest routes. Jumbo jets have been designed to use existing runways. Further airport enlargements are increasingly difficult in many major air transport markets due to the unavailability of land. Given the new expectations, DFW Airport officials now plan to, over a period of 20 years, take advantage of the airport's vast size by developing over 5,000 acres that will not ever be used for aviation. Plans for commercial land development were codified in the 1997 Airport Development Plan. Those plans imply an on-airport commercial land absorption rate of 250 acres per year over the remaining development period.</p>	
<i>Arrangement in place:</i>	
<p><b>Agreement with surrounding municipalities about the types of non-aeronautical real estate development to be allowed at DFW and tax-sharing arrangements</b></p> <p>The airport has developed the following land leasing priorities:</p> <ol style="list-style-type: none"> <li>1) Aviation-related development requiring taxiway access, such as airline passenger terminals, air cargo terminals, airline maintenance and hangar facilities, general aviation passenger terminals, aircraft parking and maintenance facilities.</li> <li>2) Aviation-related development not requiring taxiway access, such as freight forwarders, flight catering kitchens, air cargo processing facilities, warehouse and aviation fuel storage.</li> <li>3) Foreign trade zone development desiring proximity to aviation facilities, including warehousing, distribution centers, manufacturing and assembly facilities.</li> <li>4) Aviation operation and maintenance support facilities, for example: administration and maintenance buildings, utility plants, storage facilities, police/fire/emergency medical facilities.</li> <li>5) Commercial development consistent with existing or planned airport land uses that is located within the municipalities which have negotiated a tax revenue sharing agreement with the cities of Dallas and Fort Worth.</li> <li>6) Aviation business and service related facilities, such as reservation centers, office/business centers, aviation training activities and travel-related businesses.</li> <li>7) Consumer business activity providing goods and services to employee and passenger populations, e.g., hotel/motel, food and retail services, banking, automobile services, and other personal services like medical and dental, retail, health, fitness and/or day care.</li> <li>8) Other development that cannot be accommodated by the airport's owner cities and which would otherwise locate in another region or state if DFW Airport land was not available.</li> </ol> <p>In order to ensure that DFW Airport is not competing with its owner cities, Dallas and Fort Worth, for the same leasing opportunities, businesses fitting the last two categories need to demonstrate a need to be at the airport and compatibility with airport land use plans.</p>	
<i>Aim</i>	<ul style="list-style-type: none"> <li>• Increase airport income while diversifying income streams</li> <li>• Support the continued growth of the Dallas-Fort Worth area by providing appropriate facilities for aviation-related industries.</li> </ul>
<i>Effectiveness</i>	<p>DFW has worked with private firms in developing its property by leasing land. In addition to firms operating the developed properties, the airport has also formed partnerships with commercial real estate firms such as Trammell Crow and air cargo oriented REITs such as AMB to construct "high velocity flow-thru" cargo facilities. Redico, a Detroit area real estate developer is now working on passenger-oriented facilities. These large commercial real estate companies not only have expertise in state-of-the-art facility development, but they also bring with them a rich network of potential tenants.</p> <p>Average lease rates per acre have risen from \$3,955 per acre in 1974 to \$23,896 in 2008.</p>

<p><i>Factors impacting effectiveness</i></p>	<p>The airport's real estate development plans come as the center portions of the Dallas-Fort Worth "Metroplex" approaches buildout. The growing shortage of developable land, the costs of on-airport land, and tax-sharing reduces the tensions with surrounding municipalities.</p> <p>Las Colinas, founded by Ben H. Carpenter in 1972, before the airport opened, was one of the first real estate developments to use the airport as an anchor. This 12,000 acre planned airport-linked community in Irving, just east of DFW, now has 21 million sq. ft. of class A office space, 8.5 million sq. ft. of light industry, 1.3 million sq. ft. of retail, over 13,000 single- and multi-family residences housing 25,000 residents, 3,700 luxury and business-class hotel rooms, 75 restaurants, and two championship golf courses. Las Colinas hosts more than 98,000 employees, including those in four major Fortune 500 headquarters. After a long lead time, Las Colinas became a marketing success but not before being taken over by creditors during a mid 1980s real estate downturn. Las Colinas is said to still labor under a heavy burden of debt.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>1, 8, 13</b></p>	<p>The motivations for commercial land development at DFW are similar to those at Schiphol – benefit to both airport and region. In both cases, airport area real estate development is directly impacted by the metropolitan real estate market. DFW, however, lacks the frequent commuter train service of the Almere-Schiphol corridor.</p>

## **8.5 Washington Dulles International Airport (IAD)**

Washington Dulles International Airport (IAD) is located in Chantilly, VA on 11,830 acres of land (approximately 5,000 acres are used for aircraft operations) 26 miles from downtown Washington, DC. The growth in aviation in the Washington DC metropolitan area led Congress to pass the Washington Airport Act of 1950, providing federal backing for a second metropolitan airport. The site of Dulles was selected in 1958 and the airport opened in November 1962. A small unincorporated village was demolished in the construction.

The main terminal, designed by Eero Saarinen, was originally built as a compact two-level structure 600 feet long and 200 feet wide. The terminal, along with his TWA terminal at New York's Kennedy Airport (now used by JetBlue), is one of the landmarks of airport architecture. The terminal was expanded to 1,240 feet in length and the area doubled to 1.1 million square feet in a manner consistent with the original design in 1996. Dulles was the first airport in the world specifically designed for jet aircraft and allowances were made for a possible role as a spaceport. Dulles gained Concorde service in 1976. The SR-71 landed at Dulles when it set a coast-to-coast speed record of 64 minutes, an average of 2,124 mph (3,418 km/h).

a)

<p><i>Context of Arrangement:</i></p> <p>Today, Dulles is a major hub for domestic and international air travel with eleven domestic carriers and 22 international carriers offering service to 88 U.S. and 42 international destinations. It is the second busiest trans-Atlantic gateway in Eastern U.S. Dulles handled 24.7 million passengers in 2007. The Greater Washington DC area, which includes Northern Virginia and Baltimore, is the tenth-largest aviation market in the world (measured by passengers). Accordingly, the Airport is currently in the middle of a major capital improvement program which includes an expansion of terminal space, a new runway, and an automated people mover system.</p> <p>Despite its auspicious beginning and its busy present, like many new airports, Dulles was considered a white elephant for years. In many ways, it was an airport, like Montreal's Mirabel Airport, whose time would never come. Dulles was simply too distant from the centers of aviation demand. Reagan National was the primary Washington airport for many years because ground access to downtown and the suburbs was significantly more convenient than for Dulles and because much of the Washington D.C. air traffic was to regional destinations anyway. Because Washington was an important market, airlines often provided very convenient transfers for those travelling to more distant destinations.</p> <p>The situation changed as population and employment diffused outward from Washington D.C. and the I-95 corridor between Baltimore and Washington and through Northern Virginia approached buildout. Edge Cities, such as Tysons Corners arose to the west of Washington DC and, as the more proximate locations filled, the suburban frontier pushed progressively west far into Northern Virginia. Washington DC, once a sleepy commercial real estate market, boomed in the 1990s and Northern Virginia became one of only a few possible choices for the expanding office development.</p>	
<p><i>Arrangement in place:</i>     <b>Non-profit organization sympathetic to the airport discourages residential encroachment</b></p> <p>In order to avoid the significant restrictions placed on other large airports, the Washington Airports Task Force, a non-profit corporation representing "consumer, civic, and economic interests in a region whose tourism and high tech employment is closely tied to the proficiency of its scheduled air service," has issued a Homebuyer's/Broker's Guide to the Dulles area and has lobbied local officials against residential development in critical areas while arguing for disclosure of noise issues in all brochures, sales information, and deeds. The Guide warns of the factors influencing the incidence and perception of noise. It also warns that noise disamenity is likely to increase, rather than decrease, over the coming years.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• Protect against residential encroachment</li> <li>• Minimize noise complaints and possible restrictions on an increasingly busy airport</li> </ul>
<p><i>Effectiveness</i></p>	<p>The U.S. Federal government issues airport area land use compatibility guidelines that are applied locally on the basis of periodically updated on the basis of mandated noise measurements. Land use decisions outside the airport fence are a local responsibility, however, and may not always be effectively influenced by the airport. Land use surrounding Dulles, which spans the boundary between Loudoun and Fairfax Counties in Virginia, is subject to different rules on each side of the county border.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>The Federal Aviation Administration has indirect power over local land use in that it can withhold funding from airports that are not in compliance with their guidelines. Those with interests in real estate development often dispute the measurements, sometimes negotiating to alter the noise contours to allow residential construction, however. Airports have generally fought shrinking the "no development" zone surrounding airports as newer, quieter aircraft have come into service. Those gains are sometimes counter-balanced by increasing traffic.</p> <p>The majority of the problem for airports may come in the areas in which residential development is permitted. Home buyers, shopping on a Sunday, when air traffic is generally lower than on weekdays, and not spending the night, when aircraft noise may be most annoying, until after purchase may not realize the extent of their tradeoff until it after a purchase decisions is made. Residents have little leverage over actions affecting aircraft noise until an airport needs local approval for expansion. That approval can be withheld or made contingent upon noise or operating restrictions. Given that airport noise affects property values, collective action to protect or improve those values is common. (Increases in property values followed the phase out of Stage II aircraft in some metropolitan areas.)</p>

<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>1, 6</b></p>	<p>Hedonic housing models show that the choices of buyers and renters are affected by a wide range of factors. Across a number of metropolitan areas, airport proximity tends to increase housing prices but aircraft noise decreases value, for a net negative effect. In Washington DC, like in many other large metropolitan areas, prospective residents may be willing to trade the benefits of a shortened commuting time and a reduced price for the nuisance of aircraft noise – at least initially. A similar situation holds in the Netherlands as the north wing of Randstad increases in popularity as a business location choice, ever-longer commutes place growing strains on employees and their families. Pressure for residential encroachment can be expected to increase.</p>
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## **8.6 The case of Indianapolis International Airport (IND)**

Indianapolis International Airport is located close to the city of Indianapolis, only some 7 miles from the central business district. Ownership is government under a local airport authority, and has seen sustained growth from the 1950's to present.. The airport authority tried to outsource the management of the airport in 1994 that has delivered a number of positive benefits, described below.

a)

<i>Context of Arrangement:</i>	
<p>By one measure, the first privatization of a major U.S. airport was in Indianapolis, IN. U.S. law needed to be modified to allow private corporations to control the assets of commercial airports. Out-sourcing airport services has long been a common, if variable, practice in the U.S. Public general aviation airports have a long history of privatizing the management of major portions of airport operations and several of the smaller commercial airports, such as the Burbank-Glendale-Pasadena Airport in California, have had similar arrangements.</p>	
<i>Arrangement in place:</i> <b>Management contract with an internationally-recognized airport operator</b>	
<p>In 1995, BAA USA Incorporated, a wholly-owned subsidiary of BAA, was awarded a ten-year contract to manage airport operations for the Indianapolis Airport Authority. Six properties were involved. Indianapolis International Airport, Downtown Heliport, and four general-aviation fields: Mt. Comfort, Speedway, Metropolitan and Eagle Creek. BAA was chosen over three other companies and a proposal from the airport staff. BAA would not receive a fixed management fee, but share the savings it generated. BAA operated and maintained terminal businesses, including retail outlets, restaurants and bars, airside operations, short- and long-term parking and general aviation activities.</p>	
<i>Aim</i>	<ul style="list-style-type: none"> <li>• From the city's side, reduce costs to locality of operating their airport system</li> <li>• From BAA's side, demonstrate their ability to create value in the U.S. context.</li> </ul>
<i>Effectiveness</i>	<p>The Indianapolis Airport Authority had estimated that the privatization would save \$105 million over the 10 years. BAA planned to lower by a third the average cost to the airlines for each passenger boarded in order to encourage airlines to schedule more flights to Indianapolis. BAA guaranteed Indianapolis Airport Authority minimum savings of \$ 32 million over the ten years (approximately \$3 million per year). BAA's income, in fact, was to be a share in the savings and the firm would not be paid any fees unless it produced annual savings of \$6 million or more. A portion of earnings were linked to quality, not cost, improvements.</p> <p>The airport's performance in 1994 was used as a baseline for judging improvements. Indianapolis handled 6.5 million passengers in 1994 and the cost of running the airport was \$52 million. The agreement, which took effect October 1, 1995, was BAA's first venture in operating a complete airport system outside the U.K. and became a testbed watched by many in the U.S. airport industry.</p> <p>The privatization agreement was subsequently extended to run through December 2008 but, by the mutual agreement of both parties, it ended in July 2007 when the new midfield terminal was brought into service. Operations of the airport were again taken over by the Indianapolis Airport Authority. Nearly all of the airport's 460 employees kept their jobs. At the time of the handover, airport authority official were said to expect savings of \$1.7 million a year from not having to pay a management fee to a private company.</p>
<i>Factors impacting effectiveness</i>	<p>As in other U.S. cases, a key political leader, in this case Indianapolis Mayor Stephen Goldsmith, pushed for privatization. Beginning after his 1991 election and leading up to the BAA decision, more than 60 city services, from copying services to pothole filling, were contracted out under a policy of "managed competition." City workers banded together, and won, some of those contracts. The mayor's administration balanced the city budget and reduced it by \$26 million. It cut the non-public safety work force by one-third and used \$132 million in savings to hire police officers. The city also began an infrastructure improvement program. Taxes remained constant.</p> <p>Airport improvements were the centerpiece of the infrastructure program and became the largest civic project in the city's history, costing \$1.1 billion. Airside additions were made to accommodate the growing FedEx hub (its second-largest) and a new mid-field terminal planned. The 1.2-million-square-foot steel-and-glass pavilion with a swooping roofline designed by the architect Ripley A. Rasmus of the HOK Group in St. Louis was meant to become a signature gateway to a renewed metropolitan area economy based on national goods distribution, advanced manufacturing, and sports-related tourism.</p>

<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p>2, 7</p>	<p>The structure of the agreement generated no financial windfall for the Indianapolis Airport Authority or its owners. Capital expenditure remained the responsibility of the Authority and BAA had only limited financial risk. At the same time, the arrangement did not turn into a money-maker for BAA, which voluntarily withdrew. While some aspects of service did improve under BAA, most notably airport-community relations, privatization is not clearly related to either improving or declining performance of airports.</p>
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## **8.7 The case of Kansas City International Airport (MCI)**

Kansas City International Airport (MCI) encompasses 10,200 acres (4,128 hectares) in a low density suburban setting, 20 miles northwest of downtown Kansas City. In 2007, the airport had just over 11 million passengers and handled about 130,000 metric tons of cargo, small by major city airport standards. Kansas City International ranked first among medium-size airports in the J.D. Power and Associates 2007 North America Airport Satisfaction Study. U.S. News & World Report rated the airport the “third least miserable airport” in the United States.

Dedicated in 1972 in response to a flood that affected the older airport and in anticipation of the needs of the evolving jet age, the airport was a hub for TWA and Braniff. TWA originally envisioned Kansas City International as a mid-continent hub served by international jumbo jets and super-sonic transports. The airport has also served as a hub for Eastern Air Lines, Vanguard Airlines, and US Airways. American Airlines maintains an overhaul base on site but will lose approximately two-thirds of its 1,000 employees by the end of the year.

a)

<i>Context of Arrangement:</i>	
<p>Despite a slow economy, Kansas City leaders are hopeful that an airport area development district can help support the regional economy. They are counting on congestion and increasing costs in other regions to boost development in Kansas City's SmartPort, which is a member of a chain of inland ports along the NAFTA Corridor. In the more than three decades since the airport opened, airport-linked commercial development has been slow to evolve. Most of the 10,000 acres that fall within KCI's boundaries remains vacant despite the fact that nearly the entire airport has been designated as a Foreign Trade Zone. Moreover, even with its excellent highway connectivity, only a handful of distinct KCI-linked business clusters can be identified in its outlying reaches.</p>	
<i>Arrangement in place:</i> <b>Coordinated airport master planning, noise planning, and airport area land use planning</b>	
<p>Kansas City's Department of Aviation, in cooperation with the city's Department of Planning and Development and the Mid-America Regional Council, is in the middle of completing three linked studies. These are an update of the airport master plan and the airport noise impact study, which are periodically required by the Federal Aviation Administration, and a land use plan for a 53-square mile planning area. The plan will become (a draft plan has been completed) the "plan of record" for the neighborhood establishing a guide to lead the decision-making process involving neighborhood residents, developers, city staff, boards/commissions and the City Council. The plan includes provisions for infrastructure, transportation, and development sequencing. It complements the city's comprehensive plan. As an official land use plan, it will have the backing of zoning and, possibly, urban design codes. That is, the airport area land use plan is coordinated with the city's comprehensive plan and with the airport's master plan. Business site planning is a critical aspect of this plan.</p> <p>With the KCI Business District established, clusters of hotel, retail, office, industrial logistics, and residential units are anticipated to develop outward from the airport along nearby interstates and state highways. There are approximately 10,400 acres of industrial/office park development (off-airport) in the draft airport area land use plan. Development proposals are in place on 3,200 acres and these plans provide: 14.5 million square feet of office, 17.8 million square feet of logistics/industrial and 2.6 million square feet of retail. Hotel clusters and mixed-use residential are also planned. Combined commercial and industrial development is expected to employ 90,000 workers.</p> <p>A major inside-the-fence business park, known as KCI Business AirPark, has also been planned and is being developed by Trammell Crow on 640 acres in the southeastern sector of the airport. (Ground was broken this month.) The AirPark is designed to leverage the aviation and air cargo infrastructure of KCI along with its nearby highway systems to provide time-sensitive manufacturers, distributors, and logistics service providers with efficient sourcing, production, and distribution. Initial industry targets are high-tech (especially semiconductors), aerospace components, cargo distribution and third-party logistics providers. Part of the planned development will occur on the airports extensive property but the airport does not appear to be involved in outside the fence real estate development.</p>	
<i>Aim</i>	<ul style="list-style-type: none"> <li>• Coordinate and encourage growth in a two-state metropolitan region</li> <li>• Maximize resident and business benefit of development</li> </ul>
<i>Effectiveness</i>	<p>The land use plan is a city effort and development is, so far, limited. In anticipation of further commercial growth at the airport and in the region-wide SmartPort, Kansas and Missouri have worked out an interstate arrangement that is unusual, but not unique. Kansas statutes allow cooperation with adjoining states for airport plans by authorizing operation of facilities in other states, even allowing eminent domain. Kansas law also outlines the right to operate their own facilities in another state, subject to the laws of the other state. Similarly, another state may "acquire, establish, construct, own, control, lease, equip, improve, maintain, and operate airports, or restricted landing areas, or other air navigation facilities" in Kansas subject to the rules and regulations of Kansas, "subject to the laws of its own state" regarding financing related to the projects.</p>
<i>Factors impacting effectiveness</i>	<p>Coordinated planning may be facilitated by the relatively low level of commercial and residential demand. Agreements on land use and urban design might become significantly more contentious if the potential for profit increases.</p>

<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>1, 3, 8</b></p>	<p>Schiphol is one of the few airport regions attempting integrated airport and land use planning but it is not unique.</p>
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## **8.8 The case of Los Angeles Region Capacity Issues**

With a population of almost 18, million and a land area of 33,954 square miles (87,940 km<sup>2</sup>), the Greater Los Angeles region is one of the most populous regions in the U.S. and one of the most geographically extensive. Los Angeles, with a population of 3.8 million, is the largest city. Los Angeles County, which contains the city, has a population of nearly ten million, dominating the region. Much of the land is highly developed but more than half, in the drier inland areas, is sparsely populated. Los Angeles is one of the busiest gateways to the United States. The ports of Los Angeles and Long Beach are among the busiest in the country. Los Angeles is also the fifth-largest passenger market in the world (measured by number of passengers).

The region has six major commercial airports. Los Angeles International Airport (LAX) dominates with 70 percent of the passengers and 74 percent of the cargo. It is the fifth-busiest airport in the world. John Wayne Airport (SNA) in Orange County follows with 11 percent of the passengers and one percent of the cargo. Ontario (ONT) captures eight percent of the passengers but 21 percent of the cargo. Bob Hope Airport (BUR), Long Beach (LBA), and Palm Springs (PSP) have smaller market shares. Palm Springs International airport is in an inland resort area. In addition, three former military bases, March, San Bernardino, and SCLA, in remote locations now have potential roles as does Palmdale (PMD). None of these now process significant passengers or cargo.

A six-county region (Los Angeles, Orange, Ventura, San Bernardino, Riverside, and Imperial) with 187 cities has cooperated in establishing the Southern California Association of Governments (SCAG) for planning purposes. SCAG has projected that the Los Angeles region's nearly 88 million passengers in 2006 will nearly double to 170 million in 2030. Regional air cargo is expected to approximately triple to 8.7 million tons in 2030.

a)

<i>Context of Arrangement:</i>	
<p>The best possible solution, from the point of view of passenger service might be to expand capacity near the population – and passenger – centers. At this point, that appears unlikely. The combined land area of the six major commercial airports listed above just slightly exceeds that of Chicago's space-constrained O'Hare Airport and less than half that of Dallas-Fort Worth Airport. Additional runways at those airports are unlikely. Residents vetoed an attempt to add runway capacity in the western portion of the region in northern Orange County by converting a Marine Air Base into an international airport. Several of the remaining airports now have legal constraints against their expansion. In the light of these restrictions, airport operators and political leaders decided it might be more expedient to make more effective use of existing capacity, rather than continue attempting the tortuous process of adding capacity. That new consensus entails redistributing demand to more closely match capacity. The demand for air transport capacity is mainly in the west, near the coast, but the supply is inland, away from existing demand.</p>	
<i>Arrangement in place:</i>	
<p><b>Authority to coordinate supply of flights among airports; high-speed train to link population with airports</b></p> <p>In order to facilitate coordination among airports, City of Los Angeles Mayor Antonio Villaraigosa and Los Angeles County Supervisor Don Knabe decided to revive the Southern California Regional Airport Authority (SCRAA) in June 2006. SCRAA, in fact, had its origins in the 1960s when the then-director of Los Angeles's Department of Airports, Clifton Moore, realized that future LAX expansion prospects were limited by growing community opposition and that new airport capacity was needed in outlying areas. To further regionalization, the Department acquired LA/Ontario and LA/Palmdale airports as reliever facilities.</p> <p>In 1985, a joint powers agreement creating an authority with governmental powers (SCRAA) was signed by representatives of Counties of Los Angeles, Riverside, San Bernardino, and the City of Los Angeles. Orange County joined in 1992. The authority became inactive in the 1990s due to conflicts among the members with respect to airport expansion. It was revived in 2002 but then disbanded again in 2004, again due to member conflicts over regional cooperation, only to be revived in 2006.</p> <p>SCRAA was granted broad powers by the signatory governments. The authority could own, develop, and operate commercial and general aviation airports. It could issue revenue bonds, receive state and federal grants, and it could acquire property through eminent domain. At the same time, SCRAA's power was limited by the divergent interests of its constituent counties who needed to be granted effective veto power over major actions in order to enter into the agreement.</p>	
<i>Aim</i>	<ul style="list-style-type: none"> <li>• Increase regional airport capacity in order to support economic development and local consumer demand without expanding constrained airports.</li> </ul>
<i>Effectiveness</i>	<p>Given the daunting challenges of matching regional demand and capacity and the ambitious nature of the plans for doing so, it might be expected that a strengthened SCRAA, or similar authority, might be needed to implement regional airport cooperation. In fact, the region has so far rejected the possibility of a regional authority similar to the Port Authority of New York and New Jersey and, within a year and a half of its re-establishment, SCRAA voted to disband itself, rather than reform itself with more inclusive membership or different powers. It has commissioned a consultant to explore possibilities for a different form of cooperation.</p> <p>The consultant has not yet reported back to the authority but the recommendation is likely to be for inter-governmental memoranda-of-understanding (MOUs) concerning individual projects. Such MOUs have become popular over the last several years in the U.S. Such "picket fence regionalism" is a product of a need for inter-governmental coordination but an inability to agree on overarching principles and systematic power sharing. No over-arching coordination of any kind seems likely at the moment.</p>
<i>Factors impacting effectiveness</i>	<p>The coordination problems are simplified somewhat in that Los Angeles World Airports controls both the business airport and the most likely initial expansion airport, Ontario. The first maglev line is slated to connect West Los Angeles (an area of high air passenger demand) through downtown Los Angeles to West Covina and on to Ontario International Airport, a distance of approximately 56 miles with an estimated travel time of 29 minutes. The system of high-speed ground transportation, the maglev, can become the de facto mechanism of regional airport coordination, facilitating the efficient use of runway and airspace capacity. After six years of</p>

	<p>study, no implementation agency has been formed.</p> <p>No locality will enter into an agreement that it sees as harming its interests. The larger government entities in the region are seen as not being willing to share benefits.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p><b>3, 9</b></p>	<p>The national government will need to take a strong role in any attempt to solve air capacity issues by allocating flights among airports.</p>

### **8.9 The case of Chicago Midway International Airport (MDW)**

Midway has 13,500 parking spaces and 43,000 square feet of concessions, including 12 restaurants and nine retail stores. The airport's five runways handled 304,000 aircraft operations and more than 19 million passengers in 2007. Airport revenues were more than \$130 million in 2006.

a)

<i>Context of Arrangement:</i>	
<p>Privatization has been an important component of Mayor Richard M. Daley's administration. Chicago sold the rights to operate the Chicago Skyway for 99 years to Skyway Concession Company, which is owned by Cintra Concesiones de Infraestructuras de Transporte S.A. and Macquarie Infrastructure Group, for \$1.83 billion. Both privatizations were preceded by considerable public capital investments. The City of Chicago invested \$927 million in structure improvements at Midway, including a new terminal in 2004 and runway resurfacing carried out between 1990 and 1997. It also spent \$250 million in rebuilding the 7.8 mile Skyway. The city also recently leased the rights to its downtown parking system.</p>	
<i>Arrangement in place:</i> <b>First full operational lease of major U.S. airport</b>	
<p>In October 2008, Chicago's Midway Airport became the first major U.S. airport to be privatized. (The agreement between the City of Chicago and Midway Investment and Development, which will operate the airport and control its revenue for 99 years, is expected to be approved before the end of the year.) Midway Investment is a consortium of New York-based Citi Infrastructure Investors, Vancouver-based YVR Airport Services and Boston-based John Hancock Life Insurance. YVR Airport Services owns and operates 18 airports worldwide. It is owned equally by Citi Infrastructure Investors and the operator of Vancouver International Airport.</p>	
<i>Aim</i>	<ul style="list-style-type: none"> <li>• From the city side, raise funds to support non-aviation needs</li> </ul>
<i>Effectiveness</i>	<p>The 99-year concession will generate \$2.54 billion in revenue for the City of Chicago – almost \$3 billion had been expected. The price is 28 times earnings before interest, taxes, depreciation and amortization. Recent airport valuations have been above 30 times earnings. The city must repay \$1.4 billion in existing debt on the airport. Up to half of the remaining \$1.1 billion is slated to be used to shore up under-funded city employee pension funds. The rest will be used for infrastructure improvements, including building libraries, parks, schools, museums, police and fire stations.</p>
<i>Factors impacting effectiveness</i>	<p>As a condition for their approval of the transaction, the airlines operating at Midway were granted 25-year leases with charges fixed below their present levels for six years and increases tied to the cost of living (excluding food and energy) thereafter. The guarantee is expected to improve the financial health of the airlines operating out of Midway. Employees wishing to remain at Midway must be offered jobs and compensation comparable that which they already have. Many support services are already out-sourced and there are few employees.</p>
<i>Discussion and the Related Schiphol Issue(s):</i>	<p>While one airport expert (Clifford Winston of the Brookings Institution) has predicted significant operational efficiency gains, another (Aaron Gellman of Northwestern University) has expressed concern that prices will need to rise in order for investors to benefit. Midway Airport has been ranked the best in customer satisfaction among medium-sized U.S. airports. Service improvements will be difficult. Although the Midway area is enjoying a real estate investment revival, the airport itself has little excess land to develop for commercial purposes, so increased parking prices and a further expansion of retail concessions (which can have their leases terminated on short notice) have been suggested as possible revenue enhancers.</p>
2	

### **8.10 The case of Stewart International Airport (SWF)**

Stewart International Airport is located approximately 55 miles North of New York City in the lower Hudson Valley. Having a history of disputes over land use and authority issues, SWF's growth after its transformation from military airbase to civil aviation airport has seen numerous battles between the government local land owners. Regulations surrounding the governance and ownership of the airport have changed a number of times, possibly the most significant change being the attempted privatization of the airport as a part of the 1996 federal pilot program for airport privatization., explored further in the following arrangement description.

a)

<p><i>Context of Arrangement:</i></p> <p>The Federal Aviation Reauthorization Act of 1996 established the Airport Privatization Pilot Program. That program allowed up to five airports to take part in the program, exempting their public owners from certain laws and regulations governing the management of airport-related funds. The aim of the program was to attract new investment from the private sector. Program participation was restricted to a maximum of one large commercial airport, that is, an airport accounting for more than one percent of all U.S. enplanements.</p> <p>In the last twelve years, only six airports have applied to the privatization program. Only two privatizations have been approved, both airports with commercial service. Each of the general aviation airports that submitted applications, subsequently withdrew.</p>	
<p><i>Arrangement in place:</i>     <b>Public authority took over privatized airport, leading to deprivatization</b></p> <p>In June 1997, preceding the FAA's completion of an application process, New York State, which owns Stewart International Airport, issued requests for proposals from potential operators. Then-Governor Pataki had long been a supporter of the privatization of public services and facilities. In October of that year, five lease proposals were received. New York State selected National Express Group Plc of the U.K., as the preferred bidder to take over the airport in a 99-year lease. In January 1999, the application was submitted to FAA. In August, a five-year agreement favoring union labor was reached. A lease was signed in September and fully ratified February 1, 2000.</p> <p>Prior to the leasing arrangement, the state Department of Transportation paid \$315,000 annually to a private company, the New York Airport Group, to run most of the daily operations at the 9,600-acre airport. The state had reportedly lost approximately \$2 million a year in the several years prior to privatization. The airport, which began as an Army training field in the 1930s and later became an Air Force base with a runway that is nearly 12,000 feet long, enough to land the space shuttle, had been considered for a role as New York's fourth airport during the 1970s and as an SST destination. In 1999, the airport processed 400,000 passengers on 58 daily flights and was beginning to break even.</p> <p>On November 1, 2007, The Port Authority of New York and New Jersey took control over Stewart International Airport, near Newburgh, New York, approximately 60 miles north of Manhattan. The takeover marked the end of the first privatization of a commercial passenger airport in the United States after a period of only seven years. The Port Authority, a public corporation, plans to invest \$500 million in the airport over the next ten years.</p>	
<p><i>Aim</i></p>	<ul style="list-style-type: none"> <li>• From the original owner's side, offload a poorly performing and costly asset.</li> <li>• From the region's side, accelerate economic development in an area beyond the suburban development fringe that has had a wealthy economy.</li> <li>• From the Port Authority's side, acquire an asset that could eventually be used as New York's fourth major airport.</li> </ul>
<p><i>Effectiveness</i></p>	<p>State officials estimated a price of more than \$100 million for the lease to the airport. Robert W. Poole (of the pro-privatization Reason Foundation in Los Angeles), basing his estimate on the sale of airports overseas, suggested that Stewart could be worth \$142 million. These expectations proved to be far from reality. The winning bid from National Express Group, a favorite of then-Governor Pataki's privatization advisor, offered \$24 million up front, additional capital investments of \$11 million (supplemented by Federal airport funds) over ten years, plus five percent of gross revenues after an initial ten-year period for the 99-year lease. The state had promised to build a \$30 million access road in return.</p>
<p><i>Factors impacting effectiveness</i></p>	<p>Despite several intangible accomplishments, National Express could generate operating surpluses that rivaled but never equaled those of the public operators. Within months of the National Express takeover, an economic slowdown began to affect air travel nationally. Less than a year later, the World Trade Center disaster resulted in a further decrease in traffic which was coupled with an increase in security costs. As the weakest of the New York area airports, traffic suffered disproportionately. By October 2006, National express was seeking a buyer.</p> <p>The 93-year lease was bought by the Port Authority for \$78.5 million. The Port Authorities bid was higher than that offered by competing bidders but was contingent upon a sale delayed until a New York State administration more favorable to their participation was in office. The terms of</p>

	<p>the lease guaranteed National Express a fair rate of return but they may have been obligated to pass some of the gains on to New York State.</p> <p>The Port Authority hopes to process three million passengers in 2010 even as traffic is falling (after a spike of 915,000 in 2007) and as it granted \$1 million in waived gate and landing fees over six months in August 2008 in order to slow the tide of service withdrawal in the most recent air traffic downturn. Eleven million of the 104 million passengers that use the three major New York airports (all owned by the Port Authority) live in Westchester County (immediately north of New York City) and the Hudson Valley. If adequate service were available, these might be attracted to Stewart International Airport.</p>
<p><i>Discussion and the Related Schiphol Issue(s):</i></p> <p>2</p>	<p>With the exception of Chicago's Midway, all the other applicants to the privatization program, including Stewart, have been under-utilized. Business development proved no easier for a private firm than for a public agency in Stewart's case. Had the economy not slowed in 2001 and had a large local employer not drastically down-sized and had regional population grown at the rate foreseen, National Express might have been more successful.</p>

## 9. Conclusions

This section is in two parts, the first is in response to the Ministries' first question on land development and airports, the second is the summation of lessons learned from this study. For quick reference to arrangements that apply to each Commission issue, please see Table C1 in Appendix C.

**9.1 Response to the Ministries' first question** (*What roles do airports (as business organizations) play in land and real estate development near airports (as physical locations)? What is the state of affairs now, as compared to the past and possible future?*):

The role, scale and meaning of major urban airports worldwide have changed over the past two decades as a result of corporate and economic transformation. Modern airports are very different from traditional airports, they have become sub-regional activity centres characterised by growing complexity in land use, infrastructure, transport and stakeholder relations, with significant environmental impacts and sustainability concerns. Section 3 provides an insightful sample of the different ways in which major airports from around the globe are now approaching large scale land development. Sections 6, 7 and 8 provide smaller scale arrangements between airports and their regions that protect public values. Regardless of whether airports are state or privately owned, the utility of airports is being realized well beyond their original role of air transport infrastructure providers; airports are playing an increasing role as both a business and as a regional asset for the stimulation of commercial real estate development.

### *The past*

Airports have been traditionally seen as providers of public service; the link between air transport and communities. This role was relatively simple, where airports were government owned and operated in locations that were usually distant enough from urban environs to minimize airport related impacts, such as noise and traffic. Urban growth has seen increasing encroachment of residential communities close to airports, and the growth in local populations and economies has seen airports also expand in size and operational capacity. Real estate was typically developed for air-related activities such as maintenance hangars and airline services (food etc.), and more recently logistics activities such as air-cargo warehouses and freight forwarding services. This growth in air-related development saw increased employment on airport space, further increasing the demand for housing relatively close to airports. More recently, high levels of airport growth and changing governance arrangements of airports have led to changes in how airports view real estate development, looking beyond air-related development to more commercial, regional economy based development such as large shopping centers and office buildings.

### *The present*

The air transport industry is highly competitive, and its market is now underpinned by national and sub-national competitive goals. Governments have turned to their airports to provide answers to economic growth demands, and in response airports have grown rapidly. This has happened at a time when airports, in general, have been increasingly divested from direct government control, and as a result airports have sought additional funding for growth through commercial pathways such as real estate development and

off-airport investment. These activities have challenged traditional thinking of the roles and expected actions of airports, and as these expectations and roles change over time, so too must the relationship between airport and region.

The current role of airports varies from one case to the next, however there is a clear trend in new airports to show strong ties between economic and logistics functions of both airports and regions; that is, large scale airport development is becoming increasingly integrated into local and regional (and even national) planning at both economic and physical levels. Airports traditionally seen as industry leaders are now increasingly under threat of losing these positions of prestige to these new 'airport cities'. Mimicking the focus of commercial development on and near airports may not necessarily benefit existing airports, as the existing underpinning structures of airport-region relationships may not necessarily support such a shift in airport role/focus.

### *The future*

Increasingly, airports represent a phalanx of considerations, both intentional and causational, when their impacts on economies, populations, trade, tourism, employment, industry are considered. They are 'the most intensely geographical manifestations of all the forces of mobility' (Serebrisky 2003,105) and in understanding the role modern airports play in the urban development of our cities and towns, a variety of new relationships need to be recognised. These include:

- o Interpreting development trends and locational analyses. Understanding the catchments and catalysts for industrial, commercial and residential development within airport regions.
- o Compatibility of land uses for minimal conflict and increased amenity, land use determination through policy and plans recognising the motivation of all stakeholders and the needs of the broader community.
- o The reciprocity of airport and regional direct, indirect and catalytic economic impact and dependence.
- o In the rationalisation of economic impacts, recognising and understanding social economic benefit with the expectations of immediacy and equity in the delivery of goods, services and people.
- o The strategic, financial, compliance, economic and operational risks associated with airport and regional relationships and the need for the management and planning for contingencies of each.

The shift in ownership has produced another set of new relationships in the role that modern airports play in the urban development. These changes in governance relationships include:

- o Understanding the impacts and trade offs, for economic, environmental and social issues, of increasingly shared decision making through the appliance of public and private sector partnerships.

- o Public service divestiture and division of responsibility and coordination of three tiers of government policy and priority, in consideration of community needs and expectation.

The near future faces a period of change for how airports are viewed by communities and governments, but should ultimately lead to a more homogenous set of relationships that major airports hold with their surrounding regions, in light of continued air-transport growth and airport development. As airports continue to influence their surrounding regions' economic growth patterns, governments will be faced with increased pressure to utilize land more effectively around airports and within their regions, highlighting the need for more long-term coordination between airports and regions. Local communities will need to appreciate that airports are becoming increasingly responsible for employment and regional growth, not just the provision of air-transport infrastructure. This relationship, in turn, needs to be appreciated also by airports, as they become increasingly responsible for their impacts on regions. All of these trends suggest a more cooperative, rather than adversarial, stance towards airport-region relationships. Whether this transition is made through large scale, highly integrated planning or through smaller, more incremental development and governance steps, is up to the individual airport/region case.

What can be taken from this study is that the arrangements found from abroad do work for their individual cases and have been applied generally as smaller incremental steps as their airports have changed. Section 4 highlights the large scale, highly integrated strategies being adopted, but regardless of large scale or small incremental changes to airports and their governance, interpretation of these arrangements need to be considered for their fit to cases within the Netherlands, and the changing role of airports for the future.

## **9.2 Summation of lessons from the study:**

### *Growing economies, growing desires*

The concurrent expansion of commercial aviation and the expansion of the geographic scope – some might say sprawl – of cities creates the situation that has given rise to questions raised by the Ministry and the issues identified by the Commission (see Section 2). Absent even one of these trends, airport-community relationships would be significantly less contentious. Both factors are at work in the Netherlands surrounding Schiphol.

Commercial flying has grown immensely over the past several decades and, despite the impacts of security issues, SARS, fuel price hikes, and carbon concerns, can be expected to continue to grow. Flying provides a highly valued consumer good, recreational travel, and is an increasingly critical part of supply chains and of business communication. The growing air traffic will create a need for enhanced safety provisions and generate increased noise disamenity despite the improvements in aircraft.

The regional accessibility implications of growing air traffic are that existing businesses will be advantaged and new businesses either attracted to the region or founded there. That accessibility and the ensuing employment growth increase regional well-being. The enhanced and additional economic activity directly adds to regional employment and creates opportunities for providers of consumer goods and services. A portion of the new wealth is then recycled through taxes to support non-market needs.

Cities have also grown in geographic extent over the past several decades and, despite the diminishing population growth, household formation is increasing along with the demand for larger living space and ground-level dwellings. At the same time the shifting composition of the labor force has created a larger middle class with the desire and the means to afford larger, often freestanding houses. With residents stressed by ever-longer commutes via overloaded means of ground transportation, pressure to locate housing within intermediate noise zones – where aircraft traffic noise is too low to prohibit building but perhaps sufficiently high to create annoyance – grows.

#### *Why real estate matters for future growth*

At the same time, as regional economies grow, the commercial space needed also increases. Often, older floor plates are inappropriate. Older centers of activity sometimes suffer accessibility disadvantages with respect to shipping routes, corridors of long distance travel, and labor sheds. These factors lead to a search for new space, often on the outskirts of older centers, along major highways, and at multi-modal transportation interchanges, such as airports.

Driven by the expansion of air traffic and the expansion of cities, some major airports have become major centers of real estate development. Individual actors, working alone, address their own problems with the result that some airport areas have become major centers of congestion in and of themselves. Land uses are not coordinated, ground transportation is often inadequate, and the number of aircraft movements often pushes the limit of airport capacity. This situation threatens to undermine the potential regional returns that advantageous locations, rapid ground transportation, and air access that good governance could provide.

#### *Competing perspectives*

Governance in airport regions is often hampered by two factors. First, the space of function over steps space of regulation. Airports are interfaces between air and land but the air and land are governed by different sets of laws. The former is usually by the national government, with an emphasis on maximizing national welfare by encouraging trade and communication while protecting safety and, more recently, reducing environmental footprint. The latter is usually by localities, with aim promoting the benefit of each individual locality by drawing benefits to themselves and shifting costs outward.

Second, governments, even if they have the formal power to act, often lack the required legitimacy. The public does not necessarily trust local or national governments to act selflessly in the collective interest, rather than to the advantage of well-placed or especially vocal interest groups. These interest groups, whether proponents of particular government actions who overstate the benefits or detractors who exaggerate the costs, lead to a “do no harm” attitude on the part of both government officials and members of the public. The result is a severely restricted sphere of collective action, and inability to effectively solve common problems, and diminished collective good.

Our case studies addressed attempts – some successful, others provisionally so, but many not – to deal with the airport area governance problems resulting from the expansion of flying and the spreading out of cities. We concentrated on three areas: 1) the governance of the provision of airport services, 2) airside capacity expansion, and 3) the regulation of the use of airport and airport area land for non-aeronautical purposes. The second and third areas include the coordination of airport planning with regional land use

planning. For ease of consideration, we further divide the third area into the governance of commercial land use inside and outside the airport fence. Needless to say, our report does not exhaust the situations faced by airports or the arrangements used to deal with those situations, however, the case study approach allows us to extract commonalities in the issues confronting airport managers and regulators.

#### *Provision of airport services*

Just as tensions over the cost and quality of public services in general has increased as the demands placed on the public sector have grown, questions about the cost and quality of airport service have multiplied in number and volume as flying has become more closely integrated into our lives. Some critics have claimed that privatization of public services would allow improved service and lower cost. Our selected survey of experience with airport privatization suggests that it is neither the panacea that its promoters have claimed, nor the disaster that detractors have suggested. This is not to say that all publicly-run airports are managed effectively; merely that private and public managers are affected by the same operational factors and the same constraints.

The experience of Dallas Fort-Worth and Kansas City airports suggests that involvement in real estate development is not necessarily linked with private, or even corporatized, management. The pro-active involvement of Kansas City Airport (a department of the city administration) in real estate development is driven by a mandate to increase regional economic activity and a desire to maximize the benefits of an air carrier-airport-region coalition. Airports (as organizations) sometimes get involved in real estate development because others do not understand the needs and because being involved creates advantages of coordination that would otherwise not exist.

#### *Airside capacity expansion*

Airside capacity expansion has always led to tension and conflict. Many regions are hampered in their ability to expand air service by a lack of adequate governance capabilities. The sheer number of persons affected often creates an unfavorable cost-benefit ratio for airport expansion. In these situations, regions have experimented with regional multiple airport systems. While conceptually promising, the lessons have been painful and expensive. Economies of scale and scope, rivalries among airlines, and convenience of access have almost always led to the concentration of service at one of the multiple airports. Common ownership of the multiple airports, mutual governance by agreement or over-arching authority, and even independent action do not substantially reduce the frictions. This conclusion is supported by the experience of London, Paris, the San Francisco Bay area, and the New York region, in addition to our case studies of Boston and Los Angeles.

We did, however, find that a panel of arbitrators, such as that employed in the establishment and expansion of Munich's new airport can significantly speed capacity enhancements. Once national air planners have made their technical decisions, those negatively affected by the plans can argue for compensation without impeding the expansion which will benefit the community as a whole. In order for this arrangement to be workable, however, there must be a solid commitment to adequate compensation and to the principle of balanced cost and benefit.

### *Regulation of airport land*

Airport land use has always been a point of policy concern but, as suggested above, as the volume of air traffic has increased and cities have sprawled outward, commercial development on airport land has increased. The drive towards commercial development appears to be driven primarily by market demand, not the chosen strategy of the airport operator.

Both privately and publicly-managed airports do have a motivation to allow such development. As capital-intensive, cyclical businesses, they often have a large amount of long-term debt but an income stream that, while generally growing, is unstable. Non-aeronautical income from retail and parking is closely tied to air travel so that while possibly increasing revenue, does little to diversify income streams to create stability. Real estate markets are also cyclical but revenues are more predictable than aeronautical revenue.

Community-airport operator coordination with respect to on-airport commercial land use was universal in our case studies. At some airports, within-the-fence land development is fully integrated into area land use plans. At others, a commission must approve all commercial uses. In others, less forceful arrangements are in place. In one case, a detailed prioritization of permissible land uses has been drawn up. In Australia, where experience with land development by privatized airport operators is relatively new, case law is now being developed to regulate the parameters of such development. Land use for environmental and historical purposes is also regulated.

### *Regulation of near airport land*

Airport area land use outside the fence is often legally regulated. Existing laws often fall short of needs, however. Safety has been subject to regulation for decades. Nevertheless, new situations continue to arise and need to be settled by arbitration or litigation.

Airports have always been expected to be anchors for economic activity and wealth generators. They are increasingly being expected to partner directly or indirectly with public and private real estate developers to do so. Large “mainports” integrated air, sea, and land transport require the active participation of airport operators. Industrial parks for the storage and processing of air-shipped components and products request airport support. These can sometimes be positioned on land that would be unsuitable for residential development. Office and research parks attempt to create a geographic and functional focus for regional human capital and the communication needs of selected sectors.

Aircraft noise continues to be an issue surrounding airports. That issue is addressed though careful land use planning, preventing residential encroachment in the best situations. Airports must sometimes obtain injunctions to prevent irresponsible land development interfering with safety or exposing citizens to undue levels of noise. Purchase of noise impacted land is common.

Aggressive noise disamenity information programs and informal groups to guide flight paths are new outreach developments by airports to address concerns that regulation does not cover. Aircraft can be heard at levels that may not be unhealthful (although there are still serious concerns about the adequacy of sound measurement techniques) but is annoying. It is here that the social conflicts over cost-bearing and benefit-enjoyment are most in evidence. Airports have become popular lightning rods for culture wars

and identity movements. Preliminary evidence suggests that airport-community information programs and consultation groups do have an intangible effect, reducing tensions.

*In closing*

These lessons enlighten the issues raised by both the Commission ROL and the Ministries, providing insightful, yet not wholly transferrable, ideas on how to protect public values in airport related decision making. What is clear is that the Netherlands is not alone in its concerns for protecting public values, especially in the fields of cooperation and integration of land use planning on and near airports, the dilemma of airport real estate development, and ensuring that those who benefit from aviation are those who pay for its costs. There are no clear 'solutions' on addressing these issues, however, having a better understanding of the issues and values at stake will ensure that policy makers are better prepared to undertake this challenge. The overview below (Table 9.1) shows per issue identified by the Commission, which of the arrangements identified in Section 6, 7 and 8 can be put in place to overcome this issue.

Table 9.1 Overview of arrangements by issue

<b>Issue</b>	<b>Airport Arrangement</b>	<b>Page</b>
<b>1</b>	Brisbane: a), b), c), e), f) Canberra: a), b), c) Sydney: b) Perth: a) Osaka: a) Barcelona: a), b) Barcelona and Girona: d) Munich: b) Vantaa: a) Fort Worth Alliance: a) Boston: a) Dallas Fort Worth: a) Washington Dulles: a) Kansas City: a)	26, 27, 28, 30, 31 33, 34, 35 40 43 45 52, 53 55 59 62 65 67 69 72 78
<b>2</b>	Brisbane: d), e) Canberra: a) Sydney: a) Osaka: a) Ulemiste: a) Barcelona: a), b) Indianapolis: a) Chicago Midway: a) Stewart International: a)	29, 30 33 39 45 50 52, 53 75 84 86
<b>3</b>	Brisbane: c), e) Adelaide: a) Barcelona and Girona: c), d) Munich: a), b) Vantaa: a) Kansas City: a) Los Angeles Region: a)	28, 30 37 54, 55 58, 59 62 78 81
<b>4</b>	Brisbane: b), c) Osaka: a) Barcelona and Girona: c)	27, 28 45 54
<b>5</b>	Sydney: b) Munich: b)	40 59
<b>6</b>	Brisbane: f) Adelaide: a) Munich: b) Washington Dulles: a)	31 37 59 72
<b>7</b>	Munich: b) Indianapolis: a)	59 75

Table 9.1 Overview of arrangements by issue (continued)

<b>Issue</b>	<b>Airport Arrangement</b>	<b>Page</b>
8	Brisbane: a), b), c), f)	26, 27, 28, 31
	Canberra: c)	35
	Barcelona: a), b)	52, 53
	Barcelona and Girona: d), e)	55, 56
	Munich: b)	59
	Vantaa: a)	62
	Fort Worth Alliance: a)	65
	Boston: a)	67
	Dallas Fort Worth: a)	69
Kansas City: a)	78	
9	Brisbane: e)	30
	Adelaide: a)	37
	Barcelona and Girona: c)	54
	Munich: a), b)	58, 59
	Los Angeles Region: a)	81
10	Brisbane: e)	30
	Boston: a)	67
11	Munich: c)	60
	Boston: a)	67
12	Brisbane: f)	31
	Canberra: c)	35
	Sydney: c)	41
	Osaka: a)	45
	London: a)	48
	Barcelona and Girona: c)	54
Munich: b)	59	
13	Barcelona: b)	53
	Dallas Fort Worth: a)	69
14	London: a)	48
	Munich: a)	58
15	Perth: a)	43

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## Appendix A. Issues Surrounding Schiphol as per the Commission

The table below gives an overview of the prime Schiphol issues (the issues directly drawn from the Ministry's questions, which are listed in Section 2), the 15 issues identified by the Commission ROL (which are listed in Section 2 as well), and the four public failures related to the 15 issues (see Appendix B).

Table A.1: References used in the smart arrangements overview

<b>Prime Issues</b>		<ul style="list-style-type: none"> <li>a. Is it helpful to make a distinction between airport-dependent and airport-related (business) activities?</li> <li>b. How should the government handle strategic land parcels near airports?</li> <li>c. How to safeguard public values?</li> <li>d. What roles should different actors take?</li> <li>e. How to minimize litigation?</li> </ul>
<b>Category</b>	<b>Issue</b>	<b>Description</b>
<b>Societal goals</b>	1	Airside spatial planning has a large impact on the spatial patterns on the ground (i.e. aviation creates space scarcity on the ground). However, policy making is unconnected (i.e. airport policy making takes only the goals for aviation and noise hindrance into account).
	2	The gains and losses of aviation are unequally spread (an aspect that is not taken into account in the obligatory societal cost-benefit analyses).
	3	There are tensions between the national goals (mainly accessibility and noise hindrance), the regional goals (mainly regional economic growth) and the local goals (growth of the airport as such).
	4	<p>Ambiguous public policy:</p> <ul style="list-style-type: none"> <li>• The national and regional government are in conflict about the need to reserve land for a possible new runway</li> <li>• The Schiphol competitive position is one of the central goals of the national government. However, recently, the central government has introduced special air taxes, which has decreased the competitive position of Schiphol considerably</li> <li>• The spatial-economic relation between the airport and the surrounding region is non-existent in policy making.</li> </ul>

<b>'Double' roles</b>	5	<p>Schiphol combines many different roles and interests as it:</p> <ul style="list-style-type: none"> <li>• Is responsible for the airport</li> <li>• Is (co-) owner of many regional airports in the Netherlands</li> <li>• Has its own 'land acquisition company'</li> <li>• Has direct access to central government</li> </ul> <p>In this way one runs the risk that (1) the commercial interests dominate over the public interests resulting in suboptimal solutions from a societal point of view (2) the prices charged by Schiphol are too high ('market power').</p>
	6	The regional government has also 'double' goals (safeguard public interests and land development). This is ok if there is transparency etc. The latter is questioned.
	7	The national government and the municipalities of Amsterdam and Rotterdam own (part of) the airports. This can potentially lead to conflicts with the public interests.
<b>Lack of coherent policy making</b>	8	Lack of integrated spatial planning for the areas around Schiphol (only partial decisions: decisions for part of the area or from only one point of view).
	9	Each government actor is aiming at its own interests, they do not work together and no actor is mediating or steering.
	10	Regional airports and local governments fight against Schiphol and KLM.
<b>Policy making shortcomings</b>	11	The position of Schiphol is threatened due to (1) a lack of integral, spatial-economic vision on the Schiphol region (2) dependency upon home carrier KLM, which does not necessarily stay at Schiphol
	12	More court cases (although this is questioned)
	13	Schiphol benefits from the spatial reservations for possible additional runways result, but does not pay for the (large) opportunity costs
	14	The land reservations instrument is hardly used by the government. As a result, the government has to monitor constantly which ground activities are going to be undertaken.
	15	There is general dissatisfaction with the existing establishment policy.
<b>Public Failures</b>	I. Mechanisms for articulating and aggregating values II. Level playing field III. Benefit hoarding IV. Short time horizon	

**Appendix B. Bozeman’s (2002) typology for public failure**

Table B1 provides a general typology of public *failures* based on the literature. Public failures are demonstrated by the inability of a policy to uphold the seven core public failures criteria (Bozeman 2002). The definitions of each of the criteria are provided below for the case of airports and their regions, as adapted from Bozeman (2002). Bozeman’s (2002) provide a set of 7 broad lenses to apply to issues and the public values that are at stake. The 15 issues identified by the Commission (see Section 2) are mainly related to Public Failure I, II, III and IV

<b>Public Failure</b>	<b>Definition</b>
I. Mechanisms for articulating and aggregating values	When avenues for public values to be communicated and interpreted into and throughout political processes are ineffective
II. Level playing field (Imperfect Monopolies)	When markets contain government monopolies that exist in the public’s interest, but are hampered from reaching public goals due to the provision of goods and services from private entities.
III. Benefit Hoarding	When the provision of public commodities and services are limited due to their unfair access or accumulation by a limited number of parties.
IV. Short Time Horizon	When the focus of a decision is based upon short-term benefits in order to avoid the consideration of long-term negative impacts.
V. Scarcity of Providers	When the public provision of goods or services have been deemed appropriate, yet are not provided due to the unavailability of providers.
VI. Substitutability Versus the Conservation of Resources	When policies focus on the substitutability or indemnification of a resource, when it is clear that there are no satisfactory substitutes to replace it.
VII. Threats to Subsistence and Human Dignity	When the core values of society at large are threatened or violated.