Leigh|Fisher

focus
March 2015

Kuala Lumpur International Airport

Innovative Strategies to Finance Airport Infrastructure

REINVESTING IN AIRPORTS

The modernization of airports is central to enhancing the passenger experience and providing efficient and sustainable facilities, both key objectives of airport operators in a global economy and competitive environment. Efforts to reinvest in airport infrastructure are sometimes hampered by limited access to capital, uncertain government funding, slow passenger traffic growth, and changing airline business models. This first focus piece in a series examines innovative strategies that airport operators around the world are developing to address those challenges.

www.architizer.com/projects

New York's John F. Kennedy International Airport, Terminal 4

Innovative financing strategies will be increasingly important in providing modern, efficient facilities while maintaining competitive airline user charges.

Changes in the airline industry influence the design of airport facilities and often drive new funding strategies. Terminal design increasingly reflects the varying operational needs of different airlines. Modular and differentiated facilities have been constructed that are cost-effective for low cost carriers (LCCs), provide branding opportunities for network carriers, and allow airport operators to phase future expansion. Airport privatization and public-private partnerships (PPPs) have been used in both developing and developed countries, leveraging private capital to expedite modernization of infrastructure and improve the efficiency of airport operations.

In response to changes in the airline industry, airport operators have developed innovative strategies to finance airport infrastructure improvements, as discussed in this focus piece.

Low Cost Carrier Terminals

An increasing number of airport terminals are designed to accommodate the low cost carrier business model.

In the past decade, the emergence and growth of LCCs and, most recently, ultra LCCs resulted in airport strategies that better accommodate the operational needs of LCCs while maintaining competitive airport charges. At many airports in Europe and Asia, dedicated LCC terminals have been constructed with an emphasis on efficiency and low cost, including self-service check-in kiosks, limited seating configurations in departure gate areas, scaled-down baggage handling systems, and ground level boarding.

Copenhagen Airport's low-cost facility, CPH Go, opened in 2010 and offers airlines lower charges but only in exchange for compliance with specific facility use criteria, including a maximum turnaround time of 30 minutes and a requirement that at least 90% of passengers check in online, via mobile phone, or at self-service kiosks.

HISTORY OF LCC TERMINAL DEVELOPMENT
(partial list)

2003
Tampere-Pirkkala, Finland (Terminal 2)

2005
Amsterdam, Netherlands (Pier H & M)

2006
Marseille, France (mp2)
Kuala Lumpur, Malaysia (LCCT)
Milan, Italy (Terminal 2)
Changi, Singapore (Budget Terminal)

2007
Melbourne, Australia (Terminal 4)

2008
Lyon, France
New York (JFK), USA (jetBlue Terminal)
Zhengzhou, China (Budget Terminal)

2009
Jakarta, Indonesia (Terminal 3)
Rome (Fiumicino), Italy (Terminal 2)

2010
Copenhagen, Denmark (CPH Go)
Bordeaux, France (Billi)
Gold Coast, Australia

2012
Naha, Okinawa, Japan
Osaka, Japan (Terminal 2)

2014
Kuala Lumpur, Malaysia (klia2)

2015
Narita, Japan

Kuala Lumpur's new LCC terminal, klia2, opened in May 2014, replacing the airport's original LCC terminal constructed in 2006. Although klia2 was designed primarily for low-cost carriers, it is open to other airlines and includes passenger comfort features not previously considered essential in LCC terminals, such as a premium lounge and the optional use of jetways. Klia2 is designed to support the development of LCC long-haul flights, increased business passenger use of LCCs, and improved connectivity.

At John F. Kennedy International Airport in New York, jetBlue's terminal is one of the few examples of dedicated LCC construction in the United States. However, there are many U.S. airports where LCCs account for the majority of domestic passenger traffic, including Chicago Midway (Southwest has a 94% share), Long Beach (jetBlue accounts for 80%), and Fort Lauderdale (Southwest, Spirit, jetBlue, and Allegiant together total 60%).

Dedicated Terminal Facilities

Although limited primarily to airline connecting hubs, dedicated terminal facilities provide network airlines with increased opportunities for high-yield airfares, branding, and product differentiation.

Network airlines seek to provide a high level of service to their customers in order to attract high-yield business travelers, compete with LCCs, and reinforce their brand. As a result, network airlines have sponsored dedicated terminals at their major hubs, where they expect to realize direct benefits.

Terminal 5 at London Heathrow Airport opened in 2008 and was designed for exclusive use by its main airline, British Airways. The £4.3 billion cost of Terminal 5 was funded by Heathrow Airport Holdings Limited (formerly BAA) with contributions from British Airways for specific facilities, resulting in a large increase in costs passed on to all airport users. Terminal 5 includes six lounges catering to British Airways frequent flyers and Club members, work and entertainment zones, and more than 112 stores and restaurants. Since 2011, Terminal 5 has also been used by Iberia, following the merger of British Airways and Iberia and the formation of the International Airlines Group.

In 2013, Delta Air Lines and the Port Authority of New York and New Jersey opened the first phase of a $1.4 billion expansion of Terminal 4 at New York's John F. Kennedy International Airport. The Terminal 4 project includes a new 24,000-square-foot flagship Delta Sky Club with an outdoor terrace, nine new and seven renovated international gates, renovated and improved check-in areas with a dedicated Sky Priority check-in, and new dining and retail offerings. Phase two of the Terminal 4 plan, including 11 additional gates on Concourse B and relocation of Delta's regional jet operations from Terminal 2, is under way with completion expected in the summer of 2015.

London Heathrow Airport Terminal 5

Delta's SkyDeck in JFK's Terminal 4

Phased Development of Modular Facilities

An increasing number of airport terminals throughout the world are being designed as modular facilities that are cost-effective and can be easily expanded.

The modular and flexible concept of the new terminal at Queen Alia International Airport in Amman, Jordan, allows for future expansion and the ability to increase capacity from 3 million to nearly 13 million passengers per year. To enable seamless expansion, each dome of the roof canopy is a modular unit branching out from supporting columns designed to resemble leaves of a desert palm. The visionary architecture incorporates local building expertise and uses concrete as a main material to moderate the large variation in daytime and nighttime temperatures.

For the 2012 Olympics, Heathrow developed a temporary facility to accommodate peak demand by diverting nearly 10,000 athletes and 37,000 bags from the main terminals. Heathrow's temporary terminal was part of a £20 million investment to handle Olympic athletes and included 31 check-in desks and 7 security lanes to deal with departures.

Modular Design of Queen Alia International Airport in Amman, Jordan

In August 2014, Fraport AG, the owner and operator of Frankfurt Airport, received a building permit from the City of Frankfurt for a phased modular design of Terminal 3. The first construction phase will include the central terminal building and two piers to serve up to 14 million passengers per year.

Airport operators have used modular units to accommodate strong growth in passenger traffic. During the shale oil boom, several North Dakota airports created departure lounges in modular buildings to accommodate the strong growth in passenger traffic. Since 2008, the number of passengers enplaned at the North Dakota airports located in Dickinson, Minot, and Williston has more than tripled. In Dickinson and Williston, modular buildings served as temporary holding rooms after passengers pass through security. In Dickinson, a second modular unit was used to hold luggage waiting to be loaded onto aircraft.

Privatization and Public-Private Partnerships

In an environment of variable growth, capital demands, airline cost pressures, and diminishing funding sources, privatization and public-private partnerships are part of an evolving business model for airport sponsors to consider.

A sale to, or concession agreement with, a private airport operator provides access to new capital and expertise to help update airport infrastructure. Private sector involvement at airports can take many forms and has received increasing attention as a means to reduce debt, apply private sector techniques to accelerate project delivery and reduce construction costs, secure long-term efficiencies in operation and maintenance, introduce more entrepreneurial ideas in the development of non-airline revenue, and depoliticize airport decisions.

For additional information, see LeighFisher's July 2010 focus piece, "Privatization: An Alternative for Addressing Today's Challenges," available at http://www.leighfisher.com; "ACRP Report 66, Considering and Evaluating Airport Privatization," prepared by LeighFisher in 2012 and available at http://www.trb.org/main/blurbs/167156.aspx; and a regular series of transaction insights and market updates, available at http://leighfisher-globaloutlook.com/.

SELECTED RECENT AIRPORT PRIVATIZATIONS AND PUBLIC-PRIVATE PARTNERSHIPS

AIRPORT	COUNTRY	2013 PASSENGERS	YEAR OF TRANSACTION
Santiago *(a)*	Chile	15,312,649	2015
Tolouse *(a)*	France	7,567,634	2014
Dalaman (Muğla)	Turkey	4,082,434	2014
Greek Regional Airports *(a)*	Greece	19,100,000	2014
Ljubljana	Slovenia	1,267,479	2014
ANA Portuguese Airports	Portugal	32,039,332	2013
Galeão/Rio de Janeiro	Brazil	17,273,761	2013
Istanbul (third airport at greenfield site)	Turkey	*not available*	2013
London Stansted *(b)*	United Kingdom	17,852,393	2013
San Juan/Puerto Rico	USA	8,300,680	2013
Tancredo Neves/Belo Horizonte	Brazil	10,531,415	2013
Edinburgh *(b)*	United Kingdom	9,775,443	2012
São Paulo/Guarulhos	Brazil	36,190,251	2012
Viracopos/Campinas	Brazil	9,330,514	2012
Brasília	Brazil	16,559,981	2012

Note: Includes enplaned and deplaned passengers.

(a) Pending financial close.
(b) Secondary sale of pre-existing investor commitments.

Sources:

Year of transaction—Press releases for individual airports.
2013 passengers—Airports Council International, World Airport Traffic Report, 2013.

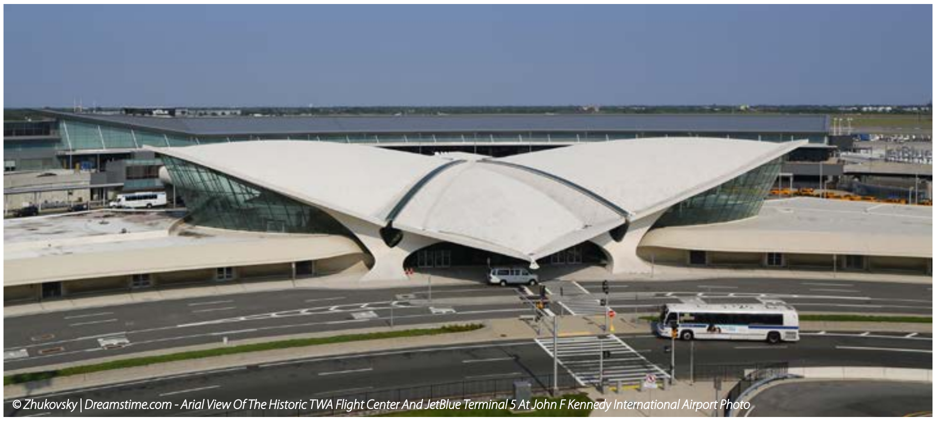
Renationalization of Airports

The case for renationalization is unique to each airport, but unprofitability and insufficient investment are often cited as motivating factors.

The reasons for renationalization of airports managed under a private airport concession are varied. They include unprofitability in the private sector, lack of sufficient investment by private operators, and the need for coordination of infrastructure planning to integrate airports into a broad economic development strategy. In some cases, political tensions also may be an important factor but ultimately it is increasingly recognized that certain airports are not financially sustainable in the private sector.

In 2013, the Welsh government purchased Cardiff Airport for £52 million from TBI, the United Kingdom airports division of Abertis Infraestructuras, S.A., a corporation based in Barcelona, Spain. Passenger traffic at Cardiff had decreased from 2.1 million in 2007 to 1.1 million in 2013, with a loss of airline service on some routes. The Welsh government's top priorities are to improve the airport's appearance and, over time, develop it as an international gateway airport.

Also in 2013, the Bolivian government nationalized Servicios de Aeropuertos Bolivianos SA (SABSA), another private airport operator owned by Abertis Infraestructuras. SABSA operated three Bolivian airports located in La Paz, Cochabamba, and Santa Cruz. Its takeover by the government followed the nationalization of a number of privately operated companies in Bolivia's energy, telecommunications, mining, and power transmission industries.



New York's John F. Kennedy International Airport, Terminal 5

Stewart International Airport in New York State was taken back into public ownership in 2006, just seven years into a 99-year lease. Lack of investment by the operator, National Express, was cited as one of the motivating factors. The Port Authority of New York and New Jersey committed $500 million over 10 years to rehabilitate the facility.

Alternative Funding Sources

Airport operators pursue additional funding sources when airline revenue, non-aeronautical revenue, and government funding are insufficient to finance infrastructure projects.

Expansion of non-aeronautical revenue, particularly the leveraging of real estate and expansion of terminal concessions, is increasingly important to counter traffic-related revenue risk. The popularity of the aerotropolis concept reflects efforts to develop revenue sources unrelated to traffic levels. Other examples include the operation of a golf course at Tokyo's Narita International Airport, a casino and an annex of the Rijksmuseum at Amsterdam's Schipol Airport, an IKEA furniture store at Athens International Airport, a medical clinic at Dallas/Fort Worth International Airport, and oil and natural gas wells at Denver International Airport.

In the United States, particularly at small airports, alternative funding sources can include special purpose sales taxes, state grants, and private in-kind contributions. In 2008 and 2012, Cheyenne, Wyoming, voters approved a total of $6.3 million generated from a special purpose sales tax for design and construction of a new airport terminal. The $54 million terminal at MBS International Airport (serving Midland, Bay City, and Saginaw) in Freeland, Michigan, was funded with $13 million in federal stimulus funding, $36 million in FAA, state, and local grants, and $5 million in cash and in-kind donations from private entities. The State of North Dakota is funding the new terminal being constructed at Minot International Airport with $18.5 million from energy impact grants, $13.7 million from local funding, and $8.1 million from federal sources.

In recent years, infrastructure investment in regulated sectors such as energy, utilities, and transportation has become increasingly popular, providing stable, long-term returns. Sovereign wealth funds, state-owned funds established from fiscal surpluses and foreign currency operations, have invested in airport operators and serve as another source of airport infrastructure funding. In 2012, the China Investment Corporation, the Chinese government's largest sovereign wealth fund, purchased a 10% stake in Heathrow Airport Holdings, the operator of Heathrow and the airports in Southampton, Glasgow, and Aberdeen. Temasek Holdings, a Singapore government sovereign wealth fund investing mainly in Asia, is majority owner of Singapore's Changi Airport and Changi Airport Investments.

Copenhagen Airport – CPH Go Terminal

Flexibility is Key

Continuing changes in the airline industry underline the importance of flexibility in planning, constructing, and financing airport projects.

As illustrated by the examples presented in this focus piece, airport operators are developing financial strategies that allow them to more readily adapt to changing industry and economic conditions. The challenge for airport operators is to:

- Evaluate how their business and operations may be affected by changes in the airline industry.
- Consider partnerships that can bring in new expertise or capital to facilitate future growth.
- Build flexibility into terminal and other airport facilities and consider how development risks can be reduced through modular expansion.
- Diversify their revenue sources to enhance the long-term resilience of income.
- Review global best practice in shaping their own future strategies.
- Reconcile construction phases with funding availability.
- Evaluate strategies to improve the efficiency of existing infrastructure at minimal cost, such as common-use gates.
- Consider technology investments that enhance airport capacity at low user cost and defer the need for facility expansion, such as docking guidance systems, intelligent airfield lighting, and integration of operations among air, tower, and ground.

SAN FRANCISCO OFFICE:
LeighFisher
555 Airport Boulevard
Suite 300
Burlingame, California 94010 U.S.A.
Tel: +1 650.579.7722
www.leighfisher.com

CHICAGO
CINCINNATI
DALLAS
TORONTO
LONDON
BOLOGNA

Prepared by Linda Perry, with contributions from Jason Snowden.

For further information, please contact:
Linda Perry—linda.perry@leighfisher.com