

Planning the 'aerotropolis'

Airport planners are not just planning airports. The economic impact of airports means that they often help to form and shape cities. Henry Canaday talks to John Kasarda, director of the Kenan Institute at the University of North Carolina.



Dr. John Kasarda points out features of the proposed North Carolina Global TransPark.

Airports shape surrounding landscapes and economies for several reasons, according to John Kasarda, director of the Kenan Institute at the University of North Carolina. He calls such airport-driven urban development an 'aerotropolis'.

"Aviation, digitisation, globalisation and time-based competition are positioning gateway airports as engines of the new economy," he says. And the trend is accelerating, with global e-commerce expected to approach \$7 trillion in 2004, according to Forrester Research. "Still, the web cannot deliver a box," Kasarda notes.

Well-connected airports attract e-commerce distribution centres, high velocity flow-through facilities, emergency-parts centres, just-in-time manufacturing as well as facilities for repair and upgrade of high-tech products. "40% of the value of world trade already goes by air," says Kasarda. "I would not be surprised if more than half goes by air in 10 to 15 years."

It is not just impatient boxes that cluster around airports. "Airports draw

corporate headquarters and regional offices, plus consulting advertising, legal, PR and accounting firms," points out Kasarda. "In fact, they attract anyone who sends professionals to customer sites or brings their clients in by air." High-tech companies are also drawn to airports because technology workers travel by air 60%–400% more frequently than the general workforce. "Furthermore, all the evidence says that new communication technology expands markets and stimulates air travel, rather than substitutes for it."

Kasarda knows the evidence of airport power. He cites a 1998 study of growth in 321 US metropolitan areas. On average, the presence of a hub airport increased the number of high-technology jobs in the local area by more than 12,000. A 1993 study estimated that areas within four miles of US airports added jobs two to five times faster than the airports' wider suburban rings. Kasarda and a colleague studied airports with extensive passenger and cargo connections. "They have pervasive effects on met-

ropolitan employment growth," he emphasises. "And the causal relationship clearly flows from extensive air connections to employment growth, not vice versa."

Kasarda notes some examples:

- Los Angeles International Airport is responsible for over 400,000 jobs in the five-county Los Angeles region, 80% of which are in Los Angeles County. The airport generates \$61 billion in regional economic activity.
- Dallas/Fort Worth International Airport has become the primary driver of Metroplex's fast-growing economy, with more than 2,000 companies located in Las Colinas just to the east of the airport.
- In the 26-mile corridor linking Reagan National and Dulles International Airports, employment grew by 1,100% from 1970 to 1996, compared to 59% for overall US employment growth.
- In the Philippines, Subic Bay Freeport is rapidly expanding around the former US Navy air base. Since FedEx located at Subic Bay in 1994,

more than 150 firms, 40,000 workers and \$2.5 billion in investment have concentrated there. From 1994 and 1999, Subic Bay exports grew from \$24 million to \$559 million.

- By late 1997, nearly 50,000 people were employed on the site of Amsterdam Airport Schiphol. The airport alone accounts for 1.9% of the Netherlands' gross domestic product and this is forecast to grow to 2.8%, or \$14 billion, by 2015.

THE VIRGIN AEROTROPOLIS

Kasarda sees the same kind of development around new airports, often on a larger scale and as a result of much more conscious planning. "Emerging corridors, clusters and spines of airport-related businesses are creating new urban forms as much as 15 miles from major airports. These are the beginnings of the aerotropolis."

Aerotropolises will unfold best with what Kasarda calls "strategic infrastructure planning" that reduces costs and speeds access to airports. This strategic infrastructure will include dedicated expressway links, or 'aerolanes,' high-speed rail, or 'aerotrains,' and special truck-only lanes on airport expressways.

Kasarda cites Southern California's Ontario Airport, 40 miles east of Los Angeles, as a fast-evolving aerotropolis. Last year, over 12 million square feet of warehouse and distribution space were added near the airport or on expressways radiating out from it. "By spring of 2000, another 10 million square feet were on the way, led by e-commerce fulfilment and distribution facilities." UPS's West Coast hub is at Ontario, handling over 700 million pounds per year. FedEx, BAX Global, Emery Worldwide and Airborne Express are there as well.

"A similar aerotropolis is emerging around Viracopos Airport in Campinas, located 60 miles east of Sao Paulo, Brazil," Kasarda notes. "Hong Kong International Airport is also spawning business and residential clusters linked to the airport on Lantau Island."

Korea's Incheon International Airport takes the aerotropolis concept very seriously. "The centrepiece will be Media Valley, Korea's version of Silicon Valley," Kasarda says. "It will include a large techno-park and a university research centre."

By mid-1999, 625 companies had submitted letters of intent to move into Media Valley. Consultants at Arthur D. Little predict that 1,300 companies will locate in Media Valley by 2003, with 700 more by 2005. By then, the airport is to be complemented by a seaport and teleport, forming a 'triptop' for 21st-century transportation, distribution, and information processing.

In Southeast Asia, the Malaysian Government plans Kuala Lumpur International Airport to anchor the southern end of a Multimedia Super Corridor – a high-tech government, commercial, education, and residential zone roughly the size of Chicago. This will stretch some 50 kilometres from Kuala Lumpur, through the new seat of government, Putra Jaya, and end at the airport. New expressways and a high-speed rail line will provide quality transportation links.

UNDERSTANDING THE AEROTROPOLIS

Neither the presence of an airport nor planning alone makes for a successful aerotropolis, Kasarda acknowledges. Sometimes, the very magnitude of effects can actually stimulate opposition. For example, the proposed conversion of California's El Toro airbase to commercial use is opposed largely because of noise and the congestion that development will bring to surrounding communities.



But a failure to understand and plan for an aerotropolis is the worst choice. Development may appear as just additional sprawl. But Kasarda says that an aerotropolis is really a very rational system, based on the time and cost required to gain access to the airport. "The three A's – accessibility, accessibility, accessibility – are replacing the three L's – location, location, location – as the organising principle of commercial real estate."

Depending on who you are or where you live, you can love or resist a new or expanding airport near your community. But you cannot ignore the growing impact of airports on urban development and form in this era of speed.

John D. Kasarda is Kenan Distinguished Professor of Management at the University of North Carolina's Kenan-Flagler Business School, where he also directs the Kenan Institute of Private Enterprise.

Ontario International Airport in Southern California is driving an emerging aerotropolis.

REQUEST FOR QUALIFICATIONS

for Environmental Consultant and Aviation Planning Services
for Environmental Impact Statement for the Juneau International Airport

The United States Federal Aviation Administration (FAA), Alaskan Region and the City and Borough of Juneau are seeking Statements of Qualifications (SOQ=s) for professional consultant firms interested in preparing an Environmental Impact Statement (EIS) for expansion of the runway safety area and other development projects as defined in the Master Plan Update for Juneau International Airport. Submission of a Statement of Qualifications is the first step in the consultant selection process. Five short listed firms will be asked to submit proposals based on the Final Environmental Assessment and study framework and participate in interviews.

RFQ DOCUMENTS may be obtained from the Engineering Contracts Office, CBJ Engineering Department, Third Floor, Marine View Center, phone number (907) 586-5230, extension 325.

RFQ QUESTIONS must be submitted in writing or by facsimile transmission to Patti Sullivan, Environmental Specialist, Airports Division, FAA Alaska Region, 222 W. 7th Avenue, #14, Anchorage, AK 99513 (FAX #907-271-2851 no later than November 13, 2000 at 4:00p.m. AST).

STATEMENT OF QUALIFICATIONS SUBMISSION: Ten (10) copies of the Statement of Qualifications, containing no more than 25 single-sided sheets, excluding a brief transmittal letter, Standard Form 254, DBE Certification, Index Sheets, and Certificate of Liability Insurance, must be delivered to the Federal Aviation Administration, Alaska Region, Airports Division, Attn: Patti Sullivan, Environmental Specialist, 222 W. 7th Avenue, #14, Anchorage, AK, 99513, no later than November 27, 2000 at 4:00pm Alaska Standard Time (AST).

Disadvantaged business enterprises are encouraged to respond.