

Charting the Future

Memphis boasts the assets to become a top-class aerotropolis

— and the leader in worldwide logistics management



THE PORT AUTHORITY THE MEMPHIS REGION IS USING RIVER COMMERCE TO EXPAND ITS GLOBAL LOGISTICS NETWORK

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PICTURES



IMAGINE A COMMUNITY with the airport at its hub, a vigorous center extending out in strategic rings. No mindless sprawl here, but a carefully planned network of logistics-related businesses, hotels and convention centers, wholesale and

retail marts, warehouses, research and technology parks, and, on the outside ring, a diverse range of houses and apartments, Imagine too, all of this linked by dedicated "aerolanes" leading from the airport to Downtown, with special corridors that promote the city's history and culture.

The image you've captured in your mind's eye is an aerotropolis, a concept envisioned and given shape by John D. Kasarda, Ph.D., the Kenan Distinguished Professor of Management and Director of the Kenan Institute of Private Enterprise at the University of North Carolina's Kenan-Flager Business School. An esteemed expert in such fields as aviation infrastructure and logistics, who is often quoted in *The Wall Street Journal*, *The New York Times*, and

international media, Kasarda is considered the leading developer of the aerotropolis concept that defines the roles of aviation and airports in twenty-first century business competitiveness and urban growth. And he considers Memphis a prime prototype for this emerging concept, a position which — assuming civic, business, and urban-planning leaders seize the reins to make his vision a reality — could make Memphis the world leader in logistics and distribution management.

"Memphis has long been a distribution center," says Kasarda, who recently spoke at the annual Memphis Regional Chamber Chairman's Luncheon in December. "But FedEx has already elevated it to a new level. Memphis has tremendous connectivity. It's strategically located in that you can get anywhere in the U.S.

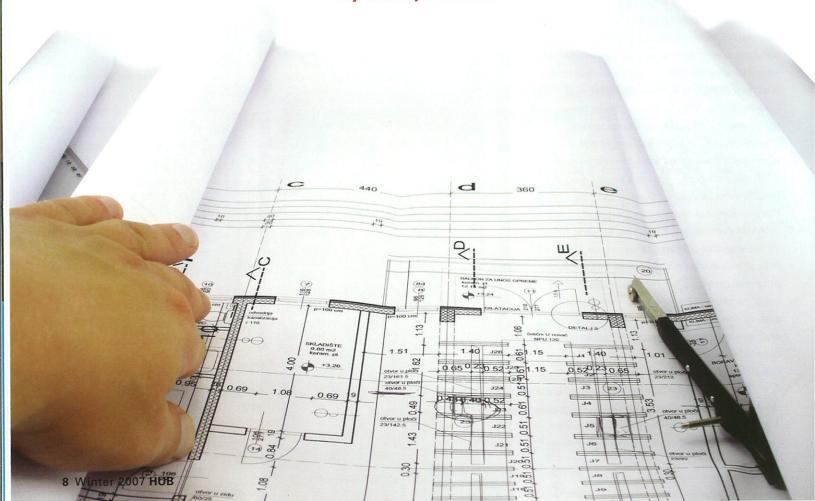
within three hours. It's quadramodal, with goods moving by river, highway, rail, and air. And it's historically good for LTL" (i.e, "less than truckload" shipments).

He sees FedEx — which has made Memphis International Airport the number-one

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by Marilyn Sadler



air cargo airport for 14 straight years — as the most powerful engine in the local aerotropolis movement: "It's paramount and generally recognized as one of the most innovative corporations of the twentieth century," says Kasarda. But other engines shouldn't be overlooked or neglected, he adds: "One is Memphis excellent surface transportation, the rail, and to some extent waterborne movement. Logistics companies are also engines. Each one helps drive the overall movement."

Since the mid-1990s, Kasarda — the recipient of various grants from such organizations as the World Bank and the National Academy of Sciences — has been working with airports around the world as they evolve from a place where planes, passengers, and cargo arrive and depart to a thriving center that encompasses much more.

Says Kasarda: "The rapid expansion of airport-centric commercial development makes today's gateways leading urbangrowth generators as they become significant employment, shopping, trading, business-meeting, and leisure destinations in their own right. The evolution of these non-aeronautical functions and commercial land uses has transformed numerous

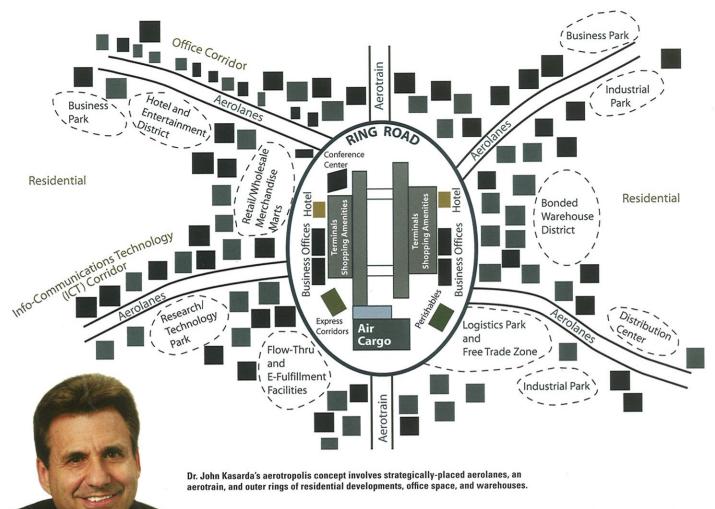
city airports into airport cities."

With passenger terminals no longer restricted to magazine shops and fast-food outlets, "they increasingly feature brandname boutiques, specialty retail, and upscale restaurants along with entertainment and cultural attractions," Kasarda continues. "Hong Kong International, for instance, hosts more than 30 highend designer clothing shops. Singapore Changi offers cinemas, saunas, and a swimming pool. Munich boasts its own hospital, while Las Vegas McCarran has a museum and Amsterdam Schiphol has a Dutch Master's gallery."

With the airport itself serving as a region-wide multimodal transportation and commercial nexus, strings and clusters of airport-linked businesses and services are forming along airport arteries up to 20 kilometers outward, says Kasarda. "This more dispersed airport-linked development is giving rise to a new urban form — the aerotropolis," he adds. "Similar in shape to the traditional metropolis, made up of a central city and its commuter-linked suburbs, the aerotropolis consists of an airport city core and extensive outlying areas of aviation-oriented businesses



Aerotropolis Schematic



and their associated residential developments."

The difference between an aerotropolis that started evolving in recent years and the

fully realized aerotropolis of tomorrow is, in a word, planning. "To date," says Kasarda, "most have evolved largely spontaneously, with growing highway traffic and nearby development often creating arterial bottlenecks."

In the future, to serve the economic demands of connectivity, speed, and agility, he says, "the aerotropolis will require localized infrastructure planning of unprecedented scale. Dedicated expressway links and high-speed rail should efficiently connect airports to business and residential clusters near and far," Kasarda says. "Special truck-only lanes should be added to airport expressways, as should improved highway interchanges to reduce congestion. Multimedia technologies should produce themed electronic public art along airport transportation corridors and at airport terminals that highlight the culture and assets of the region. By setting both the first and final impressions for many air travelers, the airport and its aerolanes represent an area's official welcome and send-off."

As the airport's role has changed, so has, to some extent, today's economy. Logistics, which deals in supply-chain-linked business processes, is no longer a support function but at the

core of a company's profit-and-loss. Air cargo and air logistics enable firms to compete globally by shipping goods that Kasarda describes as "small, light, compact, and high value to weight" — such as medical instruments, pharmaceuticals, microelectronics, and digitized parts.

If Memphis develops the aerotropolis concept, its logistics industry could take giant leaps forward. "We'll see more investment in information technology, which is crucial to logistics," says Kasarda. "FedEx already invests more in IT than it does its airplanes. Also, we're already seeing the integration of different transportation modes, especially truck and air; that's a huge advance and will continue to be. Third, the globalization of major logistics service providers, seeing them become a one-stop shop, connecting businesses and affiliates in branches of companies all over the world — that would be a major change."

Also affected by an aerotropolis' creation would be the lifestyles of people living within its borders. "By generating tens of thousands of jobs, you want the workers fairly nearby," says Kasarda. "You want to minimize the cost, the long-distance commuting that leads to additional congestion. You want residential development near the jobs but outside the noise contours and flight paths of aircraft," says Kasarda — the last being a goal that's not easily accomplished.

Among the benefits of living within the aerotropolis would be the convenience of having built-in retailers, entertainment centers, restaurants and other attractions, many with a unique local flavor. Also promoting the local touch would be highways leading to and from Downtown. "We need to use these corridors as marketing tools that promote the history, the people, the assets, the culture of the Memphis region. All that is part of placemaking or branding — providing a regional identity. Having an attractive airport and Downtown is also part of curb appeal. It makes people ask: 'Would I want to live here? Would I want to relocate my business here?'"

So what should Memphis be doing to launch this concept into action? First, Kasarda identifies three goals of an aerotropolis: "Economic efficiency, aesthetic appeal, and environmental sustainability. That's going to require bringing together three critical planning concepts: airport planning, urban planning, and business-site planning."

The second requirement — no piece of cake — is "a coordinated action plan that would not only bring the airport and city together but all the municipalities, including those in north Mississippi. Each one must buy into this concept so Memphis can fully leverage the logistics capabilities that already exist to achieve the full potential they provide," says Kasarda. "So it's a matter of not looking at the various communities as competing for business or industry but cooperating in attracting them to the broader area and perhaps even developing a revenue sharing plan so that if a business complex or major industry locates in one community, they all benefit in working together.

The third requirement of an aerotropolis, and perhaps the

most important, is identifying a "champion," says Kasarda. "Somebody who gets up every morning and goes to bed at night thinking about and directing the energies towards that vision. It must be someone highly regarded in business and government leadership, who does not polarize and therefore has the ability to bring the various parties together. It should also be a person who can pull in not only metro and state resources but who has excellent connections in Washington. That person can lead Memphis to the next level in terms not just of air commerce but broad-based logistics to consolidate Memphis' position as the logistics capital not only of the country but the world."

Assuming Memphis leaders take aggressive action, the city could see an aerotropolis taking shape within the decade. "Certain factors would be in place in 10 years," says Kasarda, "But the full realization would take between 10 and 30 years."

Tom Schmitt, president and chief executive officer of FedEx Global Supply Chain Services, Inc., has worked with Kasarda and embraces his vision of Memphis as an aerotropolis. "There are many positive implications," he says. "People come where the jobs are, that's the halo effect. Also for our e-tailing companies, our high-tech and medical-device companies, we offer high-precision distribution capability. That's important to them. So you tend to get companies who have always had a significant presence here to relocate their headquarters here, such as International Paper and ServiceMaster."

But negative factors must be addressed. "We'll need to manage the lifestyles risks, the environmental (continued on p. 18)

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Aerotropolis

(continued from p. 11)

issues, such as congestion," says Schmitt.
"And people who move here, as I did eight years ago, will have to adjust to the idea of a four-to-five-hour period at night when you've got 150 planes going in and out. So there are consequences."

Nonetheless, the FedEx engine will power the aerotropolis movement. "Obviously we have a strong interest in keeping and enhancing the momentum that's in place," says Schmitt. "For years we've leveraged the fact that Memphis is advantageous to business. With all its assets, including its perfect climate, you can't match it anywhere. So having this aerotropolis concept will say even more about the advantages we offer. People need to understand the concept and be vocal about it. As the concept becomes more widely known and Memphis takes its place within its context, other companies like ServiceMaster and IP will choose to move here."

Heading up the aerotropolis effort is Jim McGehee, the former chairman of the Memphis/Shelby County Airport Authority who worked tirelessly with other local movers-and-shakers to bring to Memphis the Northwest Airlines hub and the direct flight to Amsterdam. McGehee, who was asked by Shelby County Mayor A C Wharton to serve as chairman of the Aerotropolis Board, has chosen representatives of the Airport Authority, the Chamber, and Memphis Tomorrow to serve on the board and lay the aerotropolis foundation. Stressing teamwork, McGehee says representatives recently met with Governor Phil Bredesen and his staff to gain support for the concept.

As for being the aerotropolis "champion," McGehee says that person will soon be determined – but for now he's leading the charge. "The fact that Dr. Kasarda has emphasized that the best place in the world for an aerotropolis is Memphis, Tennessee, and that he has come here to speak gives me every confidence," says McGehee. Beyond that, he adds, "we received 75 percent federal funding for our World Runway. So I'm very positive about our future as an aerotropolis."