

## Taking Off

### **Aerotropolis moves from concept to cash with infusion from city government**

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Aviators attain flight and control the movements of their aircraft by precisely balancing the forces of lift, thrust, drag and gravity. The people piloting the aerotropolis initiative – the promotion of Memphis’ economy focused on the airport, other transportation assets and the connectivity among them – are negotiating their own set of physics in hopes of becoming airborne.

Aerotropolis proponents this week received a newfound and much needed boost when the Memphis City Council approved \$1.6 million to fund the beautification of Plough Boulevard, the road that leads to the airport from Interstate 240.

City Councilmember Kemp Conrad helped push the resolution, the first public money approved under the “aerotropolis” banner. He said the funding is important because it sends a clear message that the city is committed to improving the airport area, which contains some of the most traveled corridors in town and for many people is the gateway to Memphis.

“When business owners are coming to Memphis to move a business here, to invest in a business that’s already here or add more people, or when tourists are coming here to see Graceland ... or Beale Street, the airport is the front door to our community,” Conrad said. “And right now our front yard is shabby.”

Conrad noted that other cities are making substantial investments in beautifying their airports because “first impressions last a lifetime,” so this funding allocation might do more than spruce up a two-mile stretch of road. It could help jumpstart the aerotropolis effort in a visible, tangible way.

“This is an economic development investment that I think is going to pay dividends,” Conrad said, “because our airport is the engine of the economy.”

But the resolution, which passed the council Oct. 6, had been pushed back from its original vote in August because council members sought a better understanding of “aerotropolis.” It also was reduced from an initial amount of \$2.2 million because council members felt the project could be more cost-effective.

So while the concept has a groundswell of support from various private and public stakeholders, aerotropolis faces a constant clash of forces as a turbulent financial climate and confusion about the meaning of the nebulous term weigh down the city’s robust logistics strength and economic growth potential.

### **More than a buzzword**

Aerotropolis is a term coined by John Kasarda, a business professor at the Frank Hawkins Kenan Institute of Private Enterprise at the University of North Carolina. He first used it in the mid-1990s to describe airports in Asia that were growing into sprawling airport-cities – self-sustained economies that boasted myriad office, industrial, retail and even residential developments around an airport.



A FedEx plane passes over Winchester Road on its way to the massive FedEx Superhub at Memphis International Airport. -- PHOTOS BY LANCE MURPHEY

When Kasarda began looking at how the term might fit within the American airport model, he noticed Memphis, whose airport ranked No. 1 in the world for cargo and was a passenger hub for a major airline. Kasarda spoke to the Greater Memphis Chamber in 2006 about his aerotropolis concept. The city's leaders quickly latched onto Kasarda's claim that Memphis was the most developed aerotropolis in the country and that this concept could be used to revitalize the region.

"It's more than aspiration," said Arnold Perl, chairman of the Memphis-Shelby County Airport Authority and a partner at Ford & Harrison LLP. "It's reflective that Memphis has been identified as having more of a mature aerotropolis than any other site in the United States."

Kasarda's assessment of Memphis centered on FedEx Corp., the most important commercial success story in the city's history. As he pointed out, FedEx's ability to lure companies' distribution centers here because of its shipping capabilities from the Super Hub at Memphis International Airport has been an economic boon for the city.

A recent study commissioned by the MSCAA and conducted by the Sparks Bureau of Business and Economic Research at the University of Memphis revealed the airport pumps \$28.6 billion into the region's economy and provides, directly or indirectly, 34.3 percent – or one in three – local jobs.

Cargo accounts for \$27.1 billion of the total economic impact and 208,319 of the 220,000 jobs related to the airport, according to the study. FedEx, whose work force here totals more than 30,000 people, accounts for almost all of the city's air cargo, driving up the value of the goods that pass through Memphis en route to far-off destinations. Memphis has ranked as the world's busiest cargo airport for 17 straight years, according to Airports Council International.

The new total shows an increase from past economic studies. The airport's impact in 1998 was calculated at \$12.9 billion and in 2005 at \$20.7 billion. The steady gains helped Memphis land the 2011 Airport Cities World Conference & Exhibition, held in Athens, Greece, this year and set for Beijing in 2010.

While Kasarda and others admit these studies aren't exact and have margins of error in calculating an airport's true economic impact, they nonetheless reveal an important truth about the city's economy.

"If they're even close to being on target, it shows that the Memphis airport has a far greater impact on its region than do similar sized airports and even larger than airports that are two or three times its size," Kasarda said. "It all gets back to FedEx's hub, which is Memphis' unique value proposition."

## **Right time, right place**

FedEx's impact on Memphis goes well beyond its own sorting facilities or the Downtown arena that bears its name. Though Memphis was long known as a distribution center because of its geographic location and its proximity to river, road and rail corridors, FedEx changed the way the city – and the entire globe – did business when the company delivered its first package in 1973.

### **First impressions**

The \$1.6 million allocated to the aerotropolis initiative for the beautification of Plough Boulevard was money left over from funds originally slated for the city's new animal shelter.

That project came in under budget, leaving extra dollars for transforming the road into a parkway that will serve as an entrance for Memphis International Airport.

"FedEx was early to the party," said Larry Cox, the airport's president and CEO. "When Fred Smith created FedEx, cargo had been a dirty word. The airlines didn't much care for it, and it really didn't produce much revenue for the airlines, and the only reason they did it was because they had spare room in their baggage hold. With the beginning of FedEx here in Memphis, Tenn., the concept was fostered and grew globally that definite, in-time, quick delivery of high-value, high-priority products was important to the new economy."

The \$1.6 million covers only part of the beautification's \$3.3 million price tag and was reduced from the council's original resolution that would have brought \$2.2 million to the project. Chamber and city officials said they will seek state, federal and even grant money for the balance. Does the City Council's funding set precedence for more enhancements of airport corridors? At least one group isn't taking any chances and has been working on improving the west side of the airport since 2007.

The Memphis Airport Area Development Corp. is charged with addressing blight in that area, whose most prominent stretch is the Brooks Road corridor, home to companies such as Medtronic and Smith & Nephew, but also to unsightly strip clubs and shoddy storefronts.

Jo Ann Ferreira is managing director of hub-area business development at FedEx and president of the MAADC, and she also is involved with the aerotropolis initiative by working on its beautification committee. Ferreira called the MAADC's approach to cleaning up the airport area "tactical" while the aerotropolis group takes a more "strategic" approach. She said MAADC strives to complement the aerotropolis initiative without duplicating efforts by performing street cleanups and working with executives from Memphis' biggest corporations to improve the area.

"In recruiting business and tourism and having people come to our community, any airport in any community is one of the major ways people get to the community," Ferreira said.

Noting that the airport serves as the first impression for business recruits, convention-goers or tourists, Ferreira said it's impossible to tell definitively how much something like the appearance around the airport plays a role in a company's decision-making process. But it remains a factor in any visitor's impression of Memphis.

Ferreira said bringing companies to Memphis is like putting the city through a job interview, during which the applicant (Memphis) needs to look its sharpest if it hopes to land the job (a new company).

"If they're coming for a convention, if they're coming as tourists, if they're looking at an area for potential business investment, they many times arrive by air. That's any community, anywhere," Ferreira said. "The airport area is many people's first impression. And as the terms says, 'First impressions are often lasting ones.'"

where Memphis shines.

The metropolitan area has become one of the most important rail and intermodal centers in the country thanks to the intersection of five Class I railroads – BNSF Railway Co., Canadian National Railway Co., CSX Corp., Norfolk Southern Corp. and Union Pacific Corp. Memphis is one of just three U.S. cities to boast five of the seven Class I railroads, all of whom are bullish on their local intermodal operations, or the transfer of cargo containers between trucks and trains.

The new economy that revolved around an overnight shipping business model gave companies new opportunities for their distribution networks, and FedEx's presence brought a host of businesses to Memphis. Companies that shipped everything from auto parts to flowers to house wares snatched up warehouse space and Memphis became a critical link on the global supply chain.

Nowhere was FedEx's value more apparent than when medical device and other biotech companies began to flourish in the city during the 1980s and '90s. Medtronic Inc., Smith & Nephew Inc. and Wright Medical Group Inc. are just three firms that have found a niche in Memphis because of its central location and shipping benefits.

Michael Burrage, senior director of global operations and finance for Medtronic, the Minneapolis-based company whose Spinal and Biologics division is headquartered in Memphis, said the city has been an ideal locale for many in the industry.

"Memphis and its location are very important not only to Medtronic, but to a lot of other companies that are here in town," he said. "If you look at the world of logistics, and then you look at where Memphis fits into that, you see that Memphis has some key advantages and is very, very competitive."

Medtronic is putting the finishing touches on its logistics and distribution facility on Swinnea Road across from the airport. The company's decision to increase capacity is a prime example of the Memphis distribution model, which is bolstered by allowing shippers to drop off products late in the day – much later than in other cities – and still have them arrive early the next day.

"If you're in Los Angeles, you're lucky to get your stuff at 10 in the morning and you're pretty much cut off at 5 in the evening," Burrage said. "We've got a workday for the warehouse that is four, five, six hours longer than most other places. That's very significant. You add those up and it's a competitive place to be from a logistical standpoint."

## **Architectural reinforcements**

Memphis, of course, is more than FedEx, a point underscored by the notion that an aerotropolis covers a 20-mile radius from a city's airport. With a breadth of transportation services, this is the arena

BNSF is almost finished with a \$200 million expansion and renovation of its Tennessee Yard at Lamar Avenue and Shelby Drive. The mammoth facility will be able to accommodate 1 million intermodal lifts annually, more than double its current capacity.

CN and CSX Intermodal in 2005 opened the Intermodal Gateway-Memphis terminal at Frank C. Pidgeon Industrial Park. The 3,000-acre complex near the Mississippi River south of Downtown gives Memphis-based shippers and third-party logistics firms (3PLs) access to three continents: Asia via Prince Rupert, British Columbia; Europe via Halifax, Nova Scotia; and South America via New Orleans.

CN also completed a \$100 million overhaul to its Johnston Yard freight car switching facility in South Memphis, which it subsequently renamed Harrison Yard after outgoing CEO and Memphis native E. Hunter Harrison.

But perhaps the biggest rail news in Memphis this year occurred when Norfolk Southern announced it would build a \$129 million, 570-acre intermodal facility in Rossville. The company is creating the "Crescent Corridor," a 2,500-mile rail network that will connect Memphis with the northeastern U.S., giving the city improved access to the East Coast.

Also, the local interstate highway network – I-40 and I-55, with I-69 and I-22 coming – has kept Memphis attractive for trucking companies, and even the city's river port is the fourth busiest inland port in the U.S.

All of these attributes have transformed Memphis into a "quadramodal" city, a critical component of the aerotropolis concept, Kasarda noted.

"It's airport-driven, but these other elements – the rail, the river, the roadways – are pivotal to the overall successful development of Memphis as a logistics center and as a greater aerotropolis," he said. "These functions reinforce each other."

That angle of Kasarda's thesis resonated with chamber leaders, who began transitioning city branding from "Memphis: America's Distribution Center" to "Memphis: America's Aerotropolis. Where Runway, Road, Rail and River Merge."

"Memphis' elevation to No. 1 in terms of becoming 'Memphis: America's Aerotropolis' is by virtue of the connectivity between the four R's – between the runway, road, rail and river," Perl said. "If it was just air, this aerotropolis would not be perhaps identified as strong as it was, and would not be No. 1. You can't separate any of the four R's out of the aerotropolis architecture."

## **Credit where it's due**

The infrastructure and connectivity aspects are critical, but they're not the only reasons Memphis has grown into a major logistics, distribution and transportation player. The city's central location, mild climate and low cost of doing business – aside, perhaps, from property tax issues – round out a remarkable resume.

Buzz Fly, vice president at Patterson Warehouses Inc., said if a company wanted to have a three- or four-city distribution network, it should consider a central U.S. warehouse in Memphis. He said Memphis makes more sense than Chicago, Atlanta or Dallas because only Memphis can reach all those cities in one day by truck, and because its variety of inbound



The airport's new 336-foot air traffic control tower is about 150 feet above the current tower. Air traffic

and outbound shipping options have kept pricing competitive.

controllers will be able to view the entire airport from the new tower, including additional runways in the airport's master plan.

"When people look at it, they'll say, 'Yes, we can reach these points next day by truck.' 'Yes, we can get good inbound rates on rail.' 'Yes, we can ship intermodal on rail out of Memphis.' 'Yes, if we do need to ship parcel or air freight we can still ship it until 11 o'clock every night,'" Fly said. "I am very optimistic for the future when consultants and companies start looking at reducing the number of inventories they have from seven, eight, nine locations to three or four. Memphis fits most of those models as far as optimizing a distribution network and having the fewest number of miles to ship freight in all directions."

Neely Mallory III, president of Memphis-based 3PL Mallory Alexander International Logistics, noted that clients look to Memphis for a portion or all of their distribution needs often because of FedEx – but also because the other modes have blossomed and made the city more versatile.

"Everyone in the logistics business in Memphis has benefited because of FedEx being here," Mallory said. "I think the aerotropolis concept hinges on the success of FedEx to keep drawing these DCs (distribution centers) to Memphis and the Memphis area. You've got the FedEx and the distribution side of it covered pretty well, but that is only a small piece of it."

Yet another piece is how commercial real estate factors into aerotropolis. Does it give landlords an opportunity to raise rents? Does it dictate unwanted rezoning? Those are questions yet to be answered, but Tommy Jackson, vice president of industrial asset services for CB Richard Ellis, said aerotropolis is clearly linked with commercial real estate's industrial sector because so much warehouse and distribution space surrounds the airport.

"Now, in October, during the recession, we have got a pretty active industrial real estate market, whereas other markets across the country are all but dead," Jackson said. "All of those logistics strengths that we have complement what the aerotropolis is all about, and it's what's kept the industrial sector as active as it has been."

Though Jackson said the airport-area office and retail markets haven't kept pace, the aerotropolis model of a 20-mile radius from the airport allows for those sectors to flourish elsewhere, such as Downtown or the Poplar Avenue corridor in East Memphis.

In that regard, Memphis' aerotropolis model is decidedly different than its Asian, Middle Eastern or European counterparts, whose airports were developed on huge swaths of vacant land with piles of private development dollars pouring in. As a result, those airports and surrounding areas have become the prototypical aerotropolises, with gleaming hotels and office towers, upscale shopping centers and apartment buildings.

## **Not the only one**

The questions now are: How does the chamber market Memphis as an aerotropolis and what are the benefits of doing so? And although the chamber has trademarked a motto that touts Memphis as "America's Aerotropolis," what's to keep other cities from stealing some of Memphis' thunder?

Other cities are forging ambitious aerotropolis plans, and some of those markets are more attractive in terms of originating passenger counts and metropolitan areas served. Couldn't they trademark equally catchy and self-important monikers?

Already, Detroit has launched its "Detroit Region Aerotropolis" initiative to promote that city's transportation assets.

And the Dallas/Fort Worth airport, one of the world's busiest for passenger traffic, has attracted substantial office, retail and residential developments nearby because on-the-go executives want to live and work close to its bustling terminal.

But nowhere is the competition fiercer than in Atlanta, home to the world's largest passenger carrier, Delta Air Lines Inc., as well as the world's busiest passenger airport, Hartsfield-Jackson Atlanta International Airport.

There, a company called Jacoby Development Inc. has announced plans for a \$1.5 billion redevelopment of an old Ford Motor Co. plant into "Aerotropolis Atlanta." The mixed-use site next to the airport is expected to have 6.5 million square feet of office, industrial, retail, hotel and restaurant space on 130 acres.

Though Memphis doesn't have anything this grand in mind because of land and economic restraints, Kasarda said the city's multimodality still gives it a distinct advantage over other markets. The goal now, he said, is to leverage those advantages into further growth.

"The Memphis aerotropolis has evolved over the decades spontaneously, sometimes in a haphazard, inefficient and unsightly manner," Kasarda said. "Now they're trying to put into place the various groups – the (airport) authority, the chamber, the various developmental organizations in the Memphis area – so you'll get better efficiency, you'll get improved physical appearance and it will ultimately be more environmentally and socially sustainable."

Memphis doesn't pay Kasarda to use the aerotropolis term, but he wholeheartedly approves of the city's tagline as it tries to tap into its strengths.



A number of companies have built distribution facilities near Memphis International Airport because they can meet late deadlines for air freight shipping.

"Aerotropolis itself is generic," Kasarda said. "It basically means airport-driven economic development. You have a city evolving and basically a functional region is emerging, with the airport being the primary driver, or you could look at it as a new Downtown as far as functional linkages are concerned."

## Clashing taglines

Linkages are the cornerstone of the city's burgeoning aerotropolis brand campaign, which falls under the chamber's Memphis Fast Forward initiative, an economic development master plan of sorts for the region that includes economic development, human capital development, public

safety and government efficiency. An aerotropolis steering committee operates as part of the economic development group, or MemphisED.

Jim Covington, vice president of logistics and aerotropolis development for the chamber, said one of the challenges is getting people to understand the word and how it can propel economic growth.

"Once they hear the concept, it's a pretty easy thing to get across to people," he said. "I think it gives us a way of moving forward something that we are familiar with and that we already know is available to us through the companies and businesses that are taking advantage of the airport for their success. We're going to build on that. It's not easy, but it's a story we have to tell over and over again."

One problem is the story can be confusing, mostly because the word "aerotropolis" implies air transportation alone, even though its goal is to connect all modes of transportation. Also, many logistics

companies still cling to the chamber's old tagline for the city, "America's Distribution Center." That grittier depiction is more aligned with the notion that Memphis is a warehouse town, while the aerotropolis idea is to move beyond that reputation.

"When we were America's Distribution Center, we didn't focus on one form of transportation," said Dexter Muller, senior vice president for community development at the chamber and head of its logistics council. "We've always focused on all four modes of transportation, and that's the thing I think is misunderstood about this, that when you say aerotropolis that means 'aero-port.'"

Muller said he understands the confusion that surrounds new terminology and also why some people might think the "aerotropolis" term is a gimmick. But he noted the term "sustainability" had an equally dubious beginning. Now, it is one of the big buzzwords in American business.

"I think we're on the front end of that curve," he said. "It will move from the airport business to the economic development business and into the business world as communities promote themselves as an aerotropolis. That makes us a little edgy, and I like that."

## **Who should care, and why**

The difference between touting a city as "sustainable" and touting a city as an "aerotropolis" comes down to cultural and commercial trends. Economies that stress sustainable building and other eco-friendly principles have benefited because of an overall shift toward all things green.

Transportation, meanwhile, is mired in low demand (especially in the passenger sector) and rising fuel costs. But global trade continues to grow, and the city's rail status might remain its best chance to cash in on cargo flows.

That's what Joseph Waldo, senior consultant for Lexington, Mass.-based IHS Global Insight, told logistics and transportation executives last month at the regional logistics council meeting.

"The inland portion of trade, particularly in this country, will increasingly be moving by rail at the expense of truck," Waldo said. "This is already happening. We think it's going to accelerate."

Keeping pace means proving to people that the Memphis model won't ever look like other aerotropolises. Instead, noted Larry Jensen, president of Commercial Advisors LLC and chair of corridor development for the chamber's aerotropolis committee, the goal is to highlight Memphis' strengths, such as being a midsized and therefore more nimble market that still boasts a robust collection of assets and capacities.

"Almost every call we get from out of town is about, 'Well, I need to be within X amount of time to the airport,'" Jensen said. "A lot of times we have to explain to people that anywhere you are in Memphis you're not much more than 20 or 30 minutes from the airport. It's not like Boston or Atlanta or somewhere where it's a long distance between the infrastructure of the airport and the facilities that support what's going on in the business community."

Still, the city has to be realistic about the effect rebranding itself as an aerotropolis can have.

What if Delta de-hubs Memphis and provides fewer direct flights for local executives? What if the slumping economy cripples the city's core industries? What if the railroads are re-regulated? What if other markets make greater strides in improving infrastructure and attracting commerce? What if Memphis is unable to attract more high-paying jobs?

Yes, Memphis has done a lot of things right. The airport built the World Runway in 2000 and is making

other improvements. The city restructured its payment-in-lieu-of-taxes (PILOT) program. And now \$1.6 million is being pumped into the initiative. But a lot of work remains for aerotropolis to enjoy a smooth flight.

“The challenge is not to validate that we are ‘Memphis: America’s Aerotropolis.’ That case is compelling,” Perl said. “The challenge is having a population here understand why this will benefit them regardless of what they’re doing today.”