

AIRPORTS AND THE REGIONAL ECONOMY

CONFERENCE REPORT: AIRPORTS AND THE REGIONAL ECONOMY

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Pictured at left: Graduate students from the CUNY Aviation Institute at York College and Baruch College who are joined by speakers from the Airports conference. Pictured at right: The Honorable Gregory W. Meeks, U.S. Representative from New York City's 6th Congressional District gave the federal perspective on the importance of airports in the regional economy.

There is a very clear connection between economic growth and airport functionality, said Jack S. Nyman, the director of the Steven L. Newman Real Estate Institute in his opening remarks. Quoting Dr. John D. Kasarda, director of the Kenan Institute of Private Enterprise at the University of North Carolina's Kenan-Flagler Business School, Nyman said airports will shape business location and urban development in the 21st century as much as seaports did in the 18th century, railroads did in the 19th century, and highways did in the 20th century.

In order for New York City to remain a destination of choice for domestic and international corporations, its airports have to be up to the task of supporting the demands of passengers and cargo even as those demands grow both in size and complexity. In a fiercely competitive global economy, corporate location decisions are made not based on historic loyalties, but on today's financial realities.

In a densely populated region such as New York, where the three primary

airports – JFK, La Guardia, and Newark Liberty – are operating at or near capacity, and are constrained from much (if any) physical expansion, creative, sustainable, and smart solutions are absolutely critical to achievement of the efficiencies that are needed to promote economic growth.

In recent years, according to Madelyn Wils, executive vice president of planning, development and maritime for the New York City Economic Development Corporation, the Port Authority and airlines have invested \$1.5 billion annually to improve customer service and enhance capacity at regional airports. Right now, Delta is planning a \$1.2 billion overhaul of its Terminal 3 at JFK, which could be one of the largest infrastructure investments in the region.

SUSTAINABLE DESIGN FOR AIRPORTS

The issue of sustainability is top of mind for virtually every sector of the economy. From food on the shelves of the local grocery store, to toys in big box chain stores, and cars that roll off as-

sembly lines around the world, consumers are increasingly asking questions that were unheard of less than 50 years ago. They want to know if the food is organic, whether the toy is non-toxic, and to what extent the car has a negative impact on the environment.

Sustainability is the place where the personal experience of a place, thing or object becomes intertwined with an interest in being responsible to the greater public good. And there is no place where sustainability has more opportunities to be realized than in an airport.

Sustainability begins and ends, literally, with airport access. While the majority of passengers continue to arrive by ground transportation (either their own

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Pictured at left are some of the conference speakers and organizers. From left to right: Doreen Frasca, president and principal, Frasca Associates; Jack S. Nyman, director, the Steven L. Newman Real Estate Institute, Baruch College, CUNY; Patty Clark, senior advisor to the Aviation Director, PA NY NJ; Jeffrey M. Zupan, senior fellow, Regional Plan Association; Neysa C. Pranger, director of public affairs, Regional Plan Association; Marion Kromm White, senior associate and project manager, Gensler; Susan M Baer, director of aviation, PA NY NJ; Kiran Merchant, manager, Aviation Planning, PA NY NJ; Tom Boch, general manager, Airspace Modernization PA NY NJ; William Fife, principal, William Fife Consulting; Arthur Torno, vice president, New York, American Airlines and Robert I. Aceves, CUNY Aviation Institute at York College, CUNY. Pictured at right is the next generation, students from the CUNY Aviation Institute at York College attend the Airports conference

car, a taxi, or a car service), the New York metro areas AirTrain services for JFK and Newark Liberty International Airports took approximately 6 million people off of the roads in 2009 with service that delivers passengers directly to carrier terminals, as well as other passenger amenities within the airport such as car rental facilities, long term parking and remote 'kiss-and-fly' curbsides.

The benefits, beyond convenience for passengers, include reduced congestion and wear and tear on regional roadway networks and in the Central Terminal Area. And, AirTrain JFK was built with an eye to the future: its cars can be adapted to run on regional as well as New York City rail systems, opening the door to what architect Robert Davidson of STV, Inc. calls "the ultimate one-seat-ride." The one-seat-ride will enable passengers to board a train at regional transit connections and emerge at their terminal – and to do this on a reliable schedule as a result of coordinated departure times of connecting trains at intermodal AirTrain JFK branded transit hubs throughout the region.

Within the airport itself, sustainability reaches past the use of recycled and renewable materials in construction to the way that passengers actually move from the ticket hall to their departure gate. Marion Kromm White, an airport practice area leader at Gensler, New York, N.Y. said advances in technology, such as the increasing use of boarding passes printed prior to arrival at the airport, along with changes to security protocol resulting from increased threats of terrorism, have shifted the focus of airport design from grand entry halls to enhanced post security amenity space, where passengers now spend the majority of their time.

This shift enables architects and engineers to reduce the physical footprint and volume of the ticket hall and incorporate design elements, like significantly more natural lighting and the incorporation of renewable wind and solar energy sources that both enhance the passenger experience and have the potential to reduce energy costs. Finding ways to reduce energy usage is not only a matter of achieving operational cost savings, but

also striving to achieve "carbon neutral" airports since, according to White. "It takes 33,600 roundtrips from New York to Los Angeles to equal the emissions generated from operating one building the size of a terminal per year," she said.

Translating vision into reality is the final step in achieving sustainable airports, one that has been advanced with the use of a construction planning and execution tool that significantly reduces waste. Architects, engineers, and general contractors are increasingly using Building Information Modeling, a relational database that produces a 3D model to facilitate communication among owners, stakeholders, designers, sub consultants, contractors, and subcontractors.

Tom Rossbach, national director of aviation architecture at HNTB, New York, N.Y., said BIM has revolutionized the construction industry. Rossbach said the use of BIM leads directly to "lean construction," in which BIM is used to predict the workflow of construction to increase construction productivity.

"BIM provides extremely accurate material and labor take off calculations



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for all the elements in the building, allowing real time cost estimating updates for different design options,” he said. HNTB is currently using BIM for a \$500 million design build project at San Diego International Airport where it is creating fast track bid packages to deliver a terminal building, central plant, airside pavement, and utilities on an accelerated schedule.

How people arrive at airports, what they experience when they get there, and the cost to build and maintain such improvements are clearly major subjects that thought leaders in sustainable design and construction are focused on these days.

THE IMPACT OF AIRPORTS ON REGIONAL JOBS

In order for the New York metropolitan region to remain competitive in the global economy, the airports have to get better. They have to continue to serve destinations around the nation and world, but do it more efficiently, with better service, and at lower cost, said many conference speakers at the event.

According to Chris Ward, executive director of the Port Authority of New York and New Jersey, airports “are the number one driver for direct and indirect economic activity in the New York region.”

Dr. Michael Romanowski, director of implementation of NextGen for the Federal Aviation Administration, echoed Ward’s point with the following national statistics: over 12 million jobs, over 5 percent of gross domestic product, and over \$1.3 trillion of economic activity is tied directly to aviation.

Madelyn Wils, executive vice president of planning, development and maritime for the New York City Economic Development Corporation quantified the impact on the regional area. According to Wils, the air cargo and passenger industry supports 500,000 jobs in the tri-state region – about 5 percent of the region’s total jobs. This compares to about 337,000

jobs tied to finance and insurance and 120,000 jobs tied to real estate.

It is going to take a lot of money for the New York area’s airports to respond more effectively to passenger and cargo demands, all the speakers agreed. It is going to take money from airlines that are not as flush as they once were, from the U.S. government, which is facing two wars and the fallout from the 2008 financial crisis, and from passengers who are already fatigued by facility charges that are higher than those in most other countries. While these facts make for a challenging atmosphere within which to find money, the region’s future financial viability depends on it, and the cost of not making improvements is significant, they said.

For example, according to a study commissioned by the Partnership for New York City, the financial losses incurred by airlines due to congestion (which could be remarkably abated with the implementation of the \$20 billion NextGen system) amounted to \$834 million in 2008 and will total \$25 billion over the next 18 years. That same study concluded that the costs to the regional economy as a whole that result from productivity losses that are directly attributable to air traffic congestion include 5,600 full-time jobs that will not be created, over \$16 billion in lost output, and \$5.5 billion in lost labor income over the next 18 years.

As the public debate over funding of airport improvements continues, the Port Authority of New York and New Jersey and the Partnership for New York City, among others, are asking all stakeholders, including passengers, airlines, and construction industry professionals to support their efforts to obtain much needed federal funding.

A LOOK INSIDE NEXTGEN

One major investment in NextGen, the Next Generation Air Transportation System which will “probably be the most

important innovation that this nation can undertake for the airline industry,” said Ward. NextGen entails the implementation of a coordinated set of technological advances, the most critical of which is the replacement of radar (a vintage World War II technology) with satellite based GPS to guide the take-off, flight patterns, and landing of every aircraft nationwide.

Unlike radar, GPS will cover virtually every square inch of airspace, enabling air traffic controllers to much more effectively, efficiently, and safely direct the utilization of air space. It will also facilitate more tightly scheduled take-offs and landings at high traffic airports like JFK and Newark Liberty. NextGen’s ability to reduce congestion at the country’s two busiest airports has implications for the entire country (as well as some international destinations) since most flight delays can be traced back to problems at a single airport: JFK, Ward said.

These advances won’t come cheap; the development and implementation of NextGen carries an estimated total cost of \$20 billion over the next eight to 10 years.

Kathryn Wylde, president and CEO, the Partnership for New York City, said that it is a system that will pay for itself. The Partnership commissioned a study from the engineering firm HDR that concluded that the cost of traffic congestion was \$2.6 billion in 2008 and will amount to approximately \$80 billion over the next 20 years. These costs hit the bottom line of corporations and, according to Ward, Wylde, and Nyman of the Newman Institute, inform corporate decisions about location. The international competitiveness of the New York metropolitan region is directly tied to the performance of our airports, both in terms of connectivity to the world and efficiency of operations, they agreed. ♦