

Upgrading *to* World Class



The Future *of the*
New York
Region's
Airports



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In New York, New Jersey and Connecticut, the leading economic sectors – financial and business services, tourism, pharmaceuticals, media and communications, higher education, research and development – all rely on frequent air travel to many destinations. Indeed, the region’s status as a nexus for domestic and international air travel is intricately linked to its role as a premier center of global commerce.

Executive Summary

Intercity travel is at the core of an increasingly interconnected and competitive global economy. Without the ability to efficiently transport business and leisure travelers and time-sensitive cargo, both domestic and international business would grind to a halt. Since virtually all long-distance travel is by air, along with a high proportion of shorter distance travel between cities, metropolitan economies depend on their ability to provide high-quality airline service to many destinations. This is especially true for world-city regions like the New York metropolitan area that are even more dependent on industries with a high propensity for flying. In New York, New Jersey and Connecticut, the leading economic sectors – financial and business services, tourism, pharmaceuticals, media and communications, higher education, research and development – all rely on frequent air travel to many destinations. Indeed, the region's status as a nexus for domestic and international air travel is intricately linked to its role as a premier center of global commerce.

This crucial link between air travel and economic prosperity is threatened by a lack of adequate capacity in the region's aviation system, including air space, airports and landside connections. This is manifested in flight delays that greatly exceed those of every other major airport in the United States. These delays cost the region hundreds of millions of dollars each year in lost wages and business income. In the future, without additional capacity the impacts will be far more severe. While delays cost valuable time and can inhibit some from flying, having too few flights to handle demand will prevent millions from flying and cost the region thousands of jobs and billions of dollars.

Strained capacity at the airports is more than a local problem. Delays at the region's three major airports – Kennedy, Newark and LaGuardia – ripple through the national aviation network causing delays from Washington, DC, to Los Angeles, CA. Constraining the New York region's capacity for air travel growth would also weaken the nation's ability to compete for global business in finance, media and other industries for which New York is the nation's leading international center.

Solutions will require both short-term and long-term actions, as well as a coordinated strategy by a number of public and private sector participants, including the Port Authority of New York and New Jersey, which operates the three airports, the Federal Aviation Administration (FAA), which regulates and controls the nation's airspace, the private airlines that operate terminals and schedule flights, and the city and state agencies responsible for the roads and transit network connecting to the airports. The findings and recommendations that follow, while not necessarily representing the views of any organization other than Regional Plan Association, were developed in consultation with these and other stakeholders listed in the appendix.

Today, the region's three airports rank 1st, 2nd and 3rd for worst delays in the nation, a product of more flights than the region's constrained airports and airspace can handle. While delays at most airports in the nation averaged about 10 minutes, takeoff and landing delays at each of our airports exceeded an average of 20 minutes per flight. These averages mask the wide variability that can make flying times unpredictable and frustrating. To limit the delays created by the excessive flights scheduled during peak times, the FAA placed a cap on hourly flights at all three major airports. This action limits the ability of the three airports to meet current or projected growth.

While the rate of growth is difficult to predict, the demand for air travel is almost certain to continue to increase substantially over the coming decades. Air traffic has increased in every decade since commercial flights were introduced, and a growing international service economy will drive up demand in the future. In 2010, about 104 million people flew in and out of our three major airports. It is expected that the demand for passenger volumes would reach 150 million, if the capacity is available, as early as 2030. The growth is fueled by global economic expansion, the continuing attraction of the New York region for visitors, and growth in the region's population, from 22.4 million today to an expected 27.3 million by 2040.

If they can be accommodated, these additional air passengers represent a major source of growth for the region's economy. In 2009, air passengers and cargo generated \$16.8 billion in wages and \$48.6 billion in sales to the region, and supported nearly 415,000 jobs. Without additional capacity, the region will forego an increasing number of jobs, wages and sales each year. By the 2030s, these losses could reach as many as 125,000 jobs, \$6 billion in wages and \$16 billion in sales each year.

To both reduce delays and accommodate future demand for air travel, the region will need to expand capacity by 78 additional flights per hour during peak period, up from 236 today. This added capacity will be needed to serve an additional 39 million passengers, who without it, would be unable to fly into and out of the region's airports with reasonable predictability. Just to maintain the current uncompetitive level of 20-minute delays, there would still be a need for 45 more flights per peak hour to handle an additional 22 million passengers.

Creating this capacity will require a combination of actions, some of which can be implemented in the next few years while others could take two decades or more to complete. RPA examined six categories of potential investments and demand management.

1. Implement NextGen I and II, a phased implementation of technological investments and operational and procedural changes that would transform the nation's air traffic control system
2. Encourage the use of outlying airports – Stewart International in Orange County and MacArthur in Suffolk County – to free up capacity at the three major airports
3. Improve intercity rail service to free up capacity at the airports by shifting passengers from shorter-distance flights
4. Build a new airport to handle growing demand
5. Manage demand to reduce peak period flights
6. Expand runway capacity at the three major airports

These actions vary widely in terms of the capacity potential, cost, timeframes, implementation barriers and environmental impacts. Some actions have benefits beyond their potential to increase the effective capacity of the region's airports, and may be regional priorities even if their ability to relieve airport congestion is limited.

The potential to add capacity or reduce demand for peak-period flights was quantified for each set of actions, and the probable magnitude of costs and other impacts were considered in developing recommendations. Because of the costs and possible environmental impacts associated with runway expansion, all other possible actions were thoroughly examined to determine if, taken together, they could preclude the need to physically expand the airports.

Of all the actions considered, expansion at Kennedy and Newark airports provide the greatest potential for increasing capacity and reducing delays. The implementation of NextGen could potentially address capacity needs in the next five to ten years, but it would not alleviate the need for eventual airport expansion. Other actions would only slightly delay the need for airport expansion, yet many also provide other benefits. To ensure that New York maintains a world-class aviation system, it should strive for the dual objectives of meeting a projected demand of 150 million passengers by 2030 and reducing average delays from 20 minutes to the national norm of 10 minutes. The only way to meet these objectives is through the expeditious implementation of NextGen and immediate planning for the eventual expansion of Kennedy and Newark airports. Other short-and-intermediate-term actions, especially expanding service at Stewart and MacArthur airports, should be encouraged. Improving intercity rail service should also be implemented, both to increase traveler options and help relieve congestion before the expansion at KennedyK and Newark is completed.

The benefits and issues for each set of actions, including the potential of each to expand the capacity to handle peak-period demand is summarized below.

NextGen I and II

The FAA's *NextGen* program is a package of new technologies, such as Global Positioning Systems, that is used to track and guide aircraft, as well as a suite of operational and procedural changes. NextGen, which is being deployed by the FAA over the next few years, is capable of reducing delays and expanding airport landing and take-off capacity. This report concludes that NextGen could have a favorable effect on capacity if deployed for that purpose, but only for the next five to ten years. NextGen I, with full implementation expected by 2018, could add the capac-

ity for 21 flights an hour in the peak period. The impact of NextGen II is more difficult to predict, but would both reduce delays and add flight capacity following its projected implementation in 2025. Even with the most optimistic projections, however, growing air passenger volumes will overwhelm its ability to keep pace with demand.

Expanding Outlying Airports

The report examined the potential for shifting demand to the region's outlying airports, opening up more capacity at the three core airports. We concluded that Stewart Airport in Orange County, acquired by the Port Authority in 2007, and MacArthur Airport in Suffolk County, each would have a positive effect, but would only attract slightly more than 2.5 million of the 150 million passengers expected in the 2030s, or about 5 of the 80 additional peak-periods flights needed by the 2030s. Expansion of air service at these airports would bring other benefits, including better access for locally generated traffic in the Hudson Valley and Long Island, and give a boost to those local economies. A longer-term action could include the introduction of passenger service at Monmouth Airport, which could divert as many as 3 million passengers from Newark Airport.

Improved and High-Speed Intercity Rail

Higher speed intercity rail service is another means to attract air passengers, as it has done in recent years with improved service in the Northeast Corridor. The promise of still faster trains could attract still more customers. The expected progress in rail speeds by 2030 could shift 2 million air passengers, or the equivalent of about nine peak period flights. Truly high-speed trains, which would require significant investments in new rights-of-way, would expand rail's attractive power to over 4 million passengers. A number of factors prevent these estimates from being higher. In particular, only 15 percent of the air passenger trips to and from the airports in the region are to locations within 500 miles, and a large share of air passengers flying short distances are connecting at the New York airports to other places, making their use of rail to reach New York inconvenient for making connections. In addition to these modest improvements in flight capacity, high-speed rail would add a new dimension to intercity travel with a number of other travel and economic benefits.

Building a New Airport

Building an entirely new airport is difficult in a region as densely developed as the tri-state metropolitan area. There must be sufficient land in locations that are both suitable for development and accessible to enough potential passengers that would choose it over existing airports. An exhaustive search for parcels large enough to hold a new airport within 40 miles of the Manhattan central business district (CBD) located no appropriate sites. The possibility of expanding existing outlying airports was also examined, but these sites were either too small or too far from the CBD. Finally, the concept of constructing an airport island to serve the region was evaluated. It was concluded that the costs for a project of this scale, along with the requirement to close either Kennedy or Newark to open up airspace for the new airport, made this option untenable at this time.

Managing Demand

A number of potential demand management tools have been suggested to use existing capacity at the three major airports more effectively by encouraging higher capacity aircraft and by better utilizing the times when airport capacity is not fully used. These include bans of small-sized aircraft (under 50 seats), ban of short flights (under 250 miles), a cap on the frequency in over-served markets, pricing of peak flights to encourage shifts to the off-peak, and auctions. Most of these either proved unworkable or had only a small impact on freeing capacity. A limited number of recommendations emerged from this investigation, including the possibility of thinning out service in saturated markets. These recommendations, most of which would be resisted by some constituencies, deserve consideration for their beneficial effects on the margin, particularly in the long term at La Guardia, since physical expansion is not feasible there.

Regulation can play another role though. As passengers respond to higher speed rail service or shift to outlying airports, there is no guarantee that airlines will respond by dropping peak-hour flights. The establishment of a process to encourage airlines to drop peak-hour flights would make these other travel options more effective to free up peak airport capacity.

Ground Access and Impact on Airport Capacity

The report concludes that the limitations of ground access, while in need of attention, do not limit growth. While traffic conditions may cause additional delay and may deter some prospective passengers, they will not discourage a large number from flying if the imperatives to fly are there. Collaboration among the transportation agencies is recommended to ease traffic congestion and to develop the promising short- and long-term bus and rail transit options to all three airports outlined in this report.

Expand Existing Airports

After consideration of all the potential capacity-increasing and delay-reducing actions – NextGen, outlying airports, intercity rail, and regulatory actions – this report concludes that expansion of the capacity at Kennedy and Newark will be necessary. Options to expand La Guardia, with a smaller footprint in a more developed area, would result in less new capacity with greater impacts on local communities and navigation of surrounding waterways.

The Port Authority should begin to plan now since airport expansion will not happen overnight and serious capacity deficiencies will become even more apparent in the next ten years. At Kennedy, four alternative configurations meet basic airspace and capacity criteria. Each has its advantages and disadvantages. The choice among them, or with possible variations and phasing plans, should be made by the Port Authority, working with the local and environmental communities, in the next few years. At Newark, one configuration stands out. It is within the airport footprint, minimizing impacts off-site, but it would require the redesign and relocations of one or more of three terminals on the airport.

Conclusion

A successful expansion or reconfiguration at Kennedy and Newark, along with NextGen, can meet the twin goals of capacity and delay reduction in the 2030s and beyond. Choosing inaction will result in an economic drain on the region. It will discourage business, limit visits, and prevent our region from fully participating in the global economy.

The inability of the combined impacts of NextGen, outlying airports and faster intercity rail to stem the need for eventual airport capacity expansion should not be viewed as a reason to deemphasize these actions. To the contrary, they are each of great value. NextGen will allow the reduction of delays and the expansion of capacity through more accurate tracking and more flexible airspace opportunities. Outlying airports such as Stewart and MacArthur will serve localized areas, building up local economies and offering air travel options. Faster rail travel, particularly in the Northeast Corridor, will divert travelers from the highways and knit together the economies of the Northeast.



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Regional Plan Association is America's oldest and most distinguished independent urban research and advocacy group. RPA prepares long range plans and policies to guide the growth and development of the New York- New Jersey-Connecticut metropolitan region. RPA also provides leadership on national infrastructure, sustainability, and competitiveness concerns. RPA enjoys broad support from the region's and nation's business, philanthropic, civic, and planning communities.

RPA's current work is aimed largely at implementing the ideas put forth in the Third Regional Plan, with efforts focused in five project areas: community design, open space, transportation, workforce and the economy, and housing.

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