
New England's regional airports have continued to evolve into a true system, a system in which increasingly overlapping service areas and improved ground access options are providing passengers with real options as they make air travel decisions.

Understanding Regional Airport System Dynamics

Scheduled Passenger Jet Service Airports



The New England Regional Airport System Plan (NERASP) study is the latest effort in an ongoing program of regional planning that began around 1990.¹ New England's commitment to regional airport planning arose from two related concerns.

¹ See Sidebar, page 12, "History of Regional Planning in the New England Region."



Understanding regional airport system dynamics begins with understanding the evolving nature of the airline industry and its interaction with airport development.

First, Logan Airport in Boston, the region's busiest airport, was becoming increasingly congested and efforts to either expand capacity or develop a second major airport were judged impractical. (See Sidebar "How About a Second Major Airport in New England?").

Second, there was a growing awareness that several under-utilized airports were within easy reach of the Boston region and were capable of supporting jet service to major destinations outside New England. Many of these had just completed facility projects in response to development of new airline services following deregulation only to find passengers drawn back to Logan by airline price wars. In response to an initiative begun by the New England Council, the New England region formed a coalition of its scheduled jet service airports, the state aviation agencies, and the Federal Aviation

Administration began to develop a plan for enhancing airline services throughout the region.²

This effort to improve the development of regional airport services had the following three objectives:

1. **Improve customer service** - match air travel service to passengers' needs.
2. **Support the region's economy** - ensure an efficient and reliable system of air service development consistent with the region's growth.
3. **Provide an environmentally sound air service system** - minimize total distance traveled to access air travel, reduce passenger demand at congested airports, and avoid the need for developing a new major air passenger airport in New England.

²The New England Council, the nation's oldest regional business organization, had been active in the late eighties and early nineties in seeking a solution to growing delays at Boston Logan airport.



The Dynamics of the Regional Airport System

The behavior of this region's airport system has primarily resulted from the interaction of airline services with the distribution of demand for airline services across the region.³ By increasing their understanding of both the nature of passenger needs and the business strategies of the airlines, the public agencies in New England responsible for the airport system have substantially improved the distribution of air services for the region. This can be seen in the following review of major patterns of airline competitive strategies and consequent impacts on airport development since the deregulation of the airline industry.

Post-deregulation (1982-1989)

In the early 1980s, just after airline deregulation, Logan served 78 percent of the region's air passengers. Over the course of the decade, the development of hub and spoke systems by major airlines and aggressive airline expansion strategies introduced new jet services at regional airports and increased the use of connecting flights between Logan and regional airports with new turboprop aircraft. The regional airports invested in expanding passenger facilities and airfield improvements in reaction to rapid growth in passenger activity. By 1989, Logan's share of the market had declined to 68 percent.

Competition for market share in major markets (1990-1995)

The early 1990s ushered in a period of economic decline. In response to operating deficits, airlines shifted towards a business strategy of market dominance in major markets. This led to fare wars at Logan and premium fares at regional airports. Growth at regional airports was stagnant. Some airports were financially strained by recently expanded, but under-utilized facilities.

In an effort to create more system balance and to support regional economic expansion, a coalition of airport sponsors and aviation agencies was formed to promote the development of air transportation service throughout the region. The first action was to conduct a study of the geographical distribution of air passenger markets across the region. The purpose of this was to evaluate the opportunity for improved jet services at the regional airports.

Armed with this study, in 1996, this coalition launched its "Fly New England" campaign. It included:

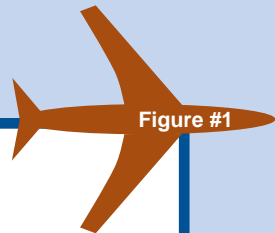
- A regional conference with all of the airlines to introduce the study findings,
- Collaborative marketing campaigns to improve passengers' and travel agents' awareness of regional airports,
- Use of the study data by airport managers to demonstrate to airlines the opportunities for enhancing revenues through lowered fares and improved routes, and
- Funding of key runway and facility improvements to support regional airport markets.

Entry of low fare airlines and growth of regional airports (1996-2000)

Coincident with the efforts of the "Fly New England" campaign, Southwest Airlines decided to expand into the New England market through the region's secondary airports rather than Logan, expanding first at Providence and then into Manchester and Bradley. This was a significant catalyst to regional demand as their entry was met with both service improvements and fare reductions by the existing airlines.

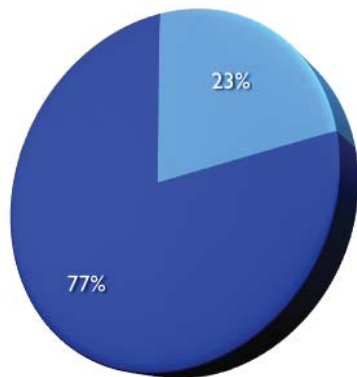
³ It's important to distinguish between demand and passenger activity levels. The region's geography, economy, population, and resources determine demand for air travel. The availability of airline services and level of fares determine how much of this demand is realized as actual passenger activity.

Entry of low fare carriers supported by “Fly New England” program reversed patterns of passenger growth



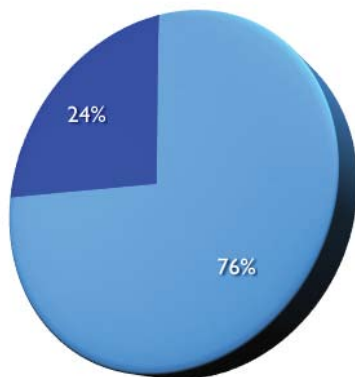
**1990-1996
2.9 Million Passenger Increase**

● Regional Airports ● Logan



**1996-1999
6.3 Million Passenger Increase**

● Regional Airports ● Logan



This led to a complete reversal of the pattern of passenger growth over the first half of the decade (See Figure #1). From 1990-1996, Logan accommodated 77 percent of the 2.9 million passenger increase in New England. Over the next three years, when the region’s air passengers increased by 6.3 million, the regional airports accommodated three-fourths of the region’s growth. During this same period, new terminal and parking facilities were completed at Bradley, major runway extensions and terminal improvements were built at Manchester, and T.F. Green expanded terminal facilities and access road capacity. Logan completed a major modernization of its terminal and circulatory roadway system. Meanwhile Logan embarked on a major planning and environmental study to find ways to improve its airfield in order to continue serving the core Boston metropolitan market.

**Post recession and terrorism
(2001-2005)**

Clearly, the terrorist attacks of September 11, 2001, caused an unprecedented and immediate decline in air passenger activity. Logan was already experiencing reduced activity due to the shake-up of the “dot-com” and financial sectors and the resulting decline in business travel. This was a period of tremendous financial crisis for most air carriers. It led to financial restructuring, a drastic reduction in the number of aircraft being flown, and a growing effort to emulate low fare carriers. Airlines pulled out of smaller markets such as Worcester. Despite these conditions, the other regional airports demonstrated a solid market that recovered much more quickly. In fact, from 2001 through 2005 Manchester maintained positive year to year growth.

However, as financial difficulties from multiple fronts continued to undercut the profits of the large network carriers, they have once again concentrated their downsized fleets in the largest airport markets. Logan and its significant passenger base has benefited. Logan now has low fare service to an extensive national network and airports such as Manchester are experiencing declining activity due to service reductions by the network carriers.⁴

⁴“Network carriers” refers to airlines with large investments in hub and spoke networks of air service.

Lessons Learned

And so we see that the past 20-plus years of air travel have featured dramatic fluctuations. These have included the creation of hub and spokes services following deregulation to a period of market dominance and fare wars in the larger market airports to the growth of the regional airports to the current post-9/11 environment. This has led to a number of useful findings and observations. They are as follows:

Major Drivers

- Airline competitive strategies are constantly evolving and have significant impact on levels of activity at airports.
- The growth in demand for air travel, the improvements in cost efficiency of new aircraft and the emergence of new airlines will continue to drive innovation in airline business strategies.
- Given the previous two conditions, airport planning that bases its decisions on current airline service strategies will likely be in error. Developing airport facilities must be based on a longer-term understanding of passenger needs.

Specific Regional Dynamics

- Manchester and Providence have similar relationships with Logan in that they function as alternative bases for airlines that compete for passengers from the greater Boston metropolitan area. Airlines prefer to match services from both airports. Inadequate facilities in one location can impede service development at both.
- The leakage rates and new service opportunities estimated in the mid nineties were a strong predictor of where passenger growth occurred in the late nineties.⁵ This is an initial confirmation of the validity of the analytical approaches being used in these studies.
- During periods of consolidation of airline services, airports dominated by low-fare carriers may lose service more rapidly since the network carriers will be targeting their services toward markets with higher profit margins.

Tactical Lessons

- There are unpredictable and significant shifts in levels of passenger activity. Financial plans for facility investments must be able to withstand fluctuations in revenue.
- A new entrant airline at Worcester and Portsmouth, Allegiant Air, purchased baggage handling and ramp services from local aviation service companies. Though this airline has since left Worcester, it may still serve as a business model that could allow other airlines to enter these markets without having to commit to the overhead of staffing a new station.
- Passengers are averse to lengthy and unpredictable delays in all segments of their air travel since it requires starting a journey with an extra margin of time that will most often be perceived as wasted waiting in an airport terminal. If an airport can demonstrate greater reliability and predictability of all portions of the air trip, they may be able to significantly influence the passengers' choice of airports.

High Speed Rail

- During the initial period following 9/11, there was an increase in passengers using Amtrak service to the New York City area. Unfortunately, equipment problems interrupted this shift in mode choice. Nonetheless, Amtrak rail service demonstrated its value as a complement and back up to air service for this segment of the Northeast Corridor. Of course, neither mode is a perfect substitute for the other. Public investments need to evaluate each system on terms of its own primary passenger base and consider their ability to complement each other as an additional and highly desirable public benefit.

⁵ Leakage rates refer to the percentage of passengers who use airports outside of the airport catchment area. Airport catchment areas extend from an airport to the point where travel times to an adjacent airport are equal.

History of Regional Planning in the New England Region

- 1989** Massachusetts System Plan identified the need to land bank a site for a second major airport as Logan was forecasted to reach capacity by 2010.
- 1990** Massachusetts initiated a site selection study for a second major airport.
- 1993** The Massachusetts Strategic Assessment Report identified that a greater use of regional airports combined with airfield improvements at Logan and high-speed rail service to New York City could provide an alternative to a new major airport.
- 1994** A coalition of the six New England State Aviation Agencies, all of the scheduled jet passenger service airports, and the New England Council was formed and initiated the "New England Regional Air Service Study."
- 1996** The regional coalition held a "Fly New England" workshop with airline representatives to present the findings of this study and to outline collaborative marketing programs.
- 1998** Phase II of the regional air service study provided updated data on air service opportunities in the region.
- 2002** Phase I of the New England Regional Airport System Plan (NERASP) was initiated.
- 2004** Start of Phase II of the NERASP study.



Looking Ahead

The last 20 years have demonstrated that the airline industry is volatile. It shows that a regional strategy is needed; one that has both the flexibility to accommodate the need of the airlines to operate efficiently and an understanding of long-term market forces. New England's regional airports have continued to evolve into a true system, a system in which increasingly overlapping service areas and improved ground access options are providing passengers with real options as they make air travel decisions. It has benefited by combining an understanding of the long term needs of passengers with an appreciation for the financial risks in the air transportation industry and the interaction among our airport markets. Looking ahead it is vital that, while each airport plans its own development program, we maintain at the same time a shared vision of how the New England Airport System can function in a way that provides optimal air transportation services to serve the region's future.

Looking ahead it is vital that, as each of the airports plan their own development program for the future, together we have a shared vision of the region's needs for air transportation services.



This Report

The rest of this report presents the building blocks upon which this shared vision can be developed. These are organized around the following questions:

- How were the forecasts developed, what are the critical assumptions and how do they deal with the uncertainties of the air transportation marketplace?
- What do we know about future passenger needs?
- What are the challenges and key objectives in developing a regional system to respond to those needs?

More detailed information is provided in the two-page presentation of data for each airport. Finally, all of the technical papers developed during the course of this study have been compiled on a CD (see back cover for ordering information). ✈️

How about a Second Major Airport in New England?

Typically, whenever a major airport such as Logan is facing increased congestion and lacks the opportunity to expand, there arises the question of building a new airport to solve the problem.

Peter Meade was the President of the New England Council in the early nineties. The Council had studied the problems at Logan and concluded in 1989 that there was a need to begin developing a Second Major Airport in Massachusetts. When Fort Devens was closed as an active military base there were ongoing studies considering developing it into a major commercial airport. Mr. Meade relates the following discussion with a leading member of the region's congressional delegation on this issue.

When I told the Senator that we would like his support for redeveloping the base as a new major airport he looked at me and said,

“Before you came in I was meeting with a group that wanted a federal prison in order to keep out the airport, and before that there was a group that preferred a trucking terminal. And after I meet with you I have an appointment with a group willing to consider a nuclear waste disposal site to prevent an airport being developed! Now what do you think the chances are that you can get sufficient popular support behind using the base for an airport?”

Swallowing that dose of reality, Peter Meade began a discussion with airport officials and the FAA about how the region could function without a new airport. From these efforts, grew the six state consortium of aviation agencies and airports that launched the “Fly New England” project and this latest study. ✈️