MIAMI INTERNATIONAL AIRPORT

SMP 2015-2050

KENDALL-TAMIAMI EXECUTIVE AIRPORT • OPA-LOCKA EXECUTIVE AIRPORT • HOMESTEAD GENERAL AVIATION AIRPORT • DADE-COLLIER TRAINING AND TRANSITION AIRPORT

STRATEGIC AIRPORT MASTER PLANNING STUDY

FOR MIAMI-DADE COUNTY'S SYSTEM OF AIRPORTS

Alternative Demand Scenarios Advisory Panel Workshop
May 5th, 2011

MIAMI-DADE AVIATION DEPARTMENT

MIAMI INTERNATIONAL AIRPORT

MIAMI-DADE COUNTY

SMP Overview

1. Prior Studies
2. Current MIA Capital Improvement Program (CIP)
3. SMP Goals and Objectives
4. SMP Study Approach
5. Workshop Objectives

SMP Background – Prior Studies

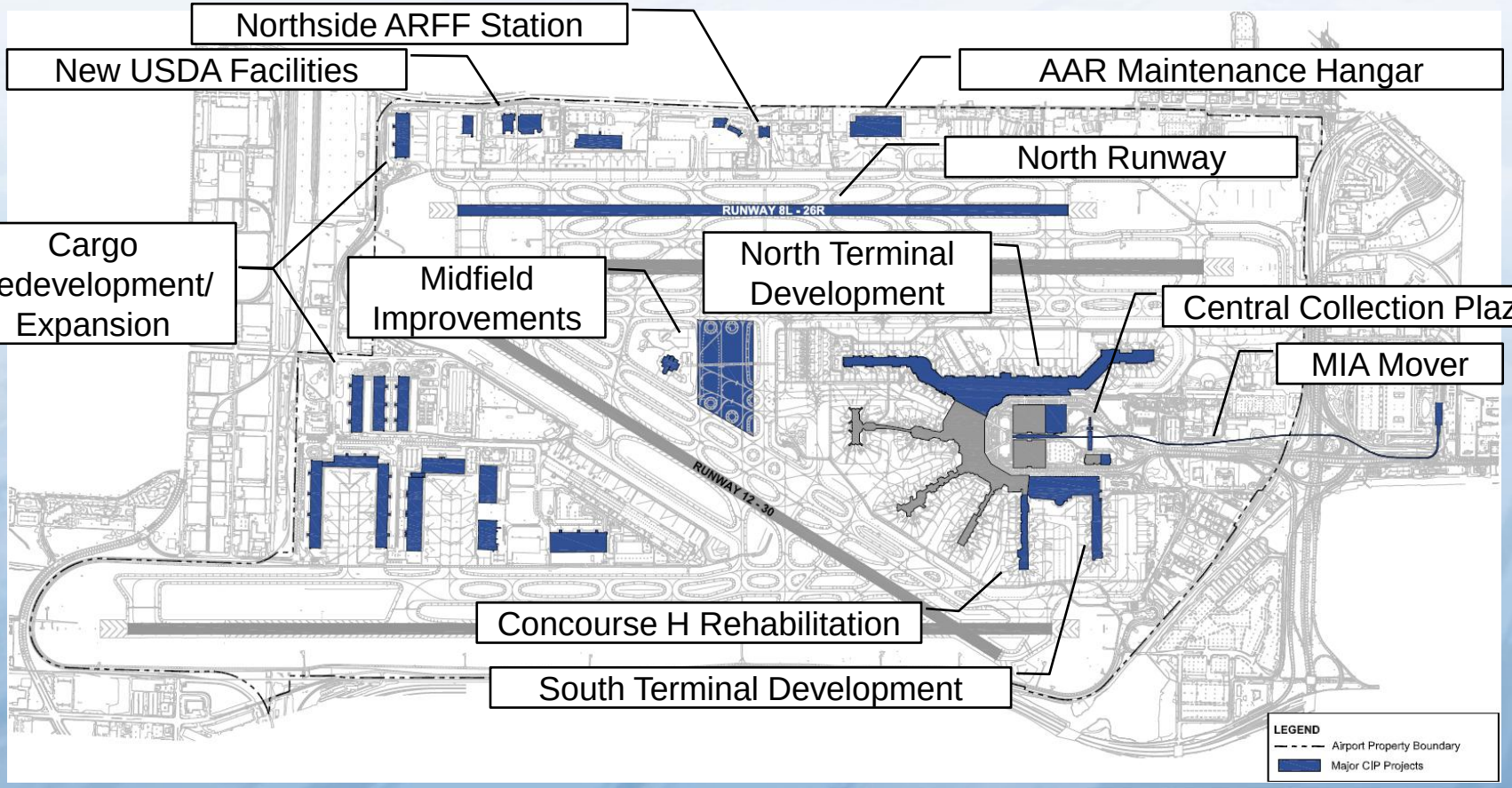
The current Master Plan for MIA recommended several of the projects included in the ongoing CIP. The Master Plan was initiated in 1991 and adopted in 1994. It focused on airport needs for the 1990-2010 timeframe.

An Aviation System Plan Update was commissioned in 1996 but never adopted.

A Strategic Terminal Planning Study was requested by the BCC. The Study was initiated in 1995 and completed in 1997. It focused on airfield and terminal development strategies for the 2010-2040 timeframe.

Current MIA CIP

Capital Investments:



SMP Goals and Objectives

- Comprehensive evaluation of aviation facilities:
  - Airfield
  - Terminals
  - Vehicular parking & roadways
  - Tenant facilities (cargo, aircraft maintenance, etc.)
  - Support facilities (airport administration, fueling, fire rescue, etc.)
- Strategic plan for MIA and the County's system of GA airports:
  - Outlines long-term capital investment strategies
  - Planning horizon: 2015 through 2050
  - Considers multiple development scenarios

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SMP Study Approach

STRATEGIC AIRPORT MASTER PLANNING STUDY

PHASE 1

MIA Master Plan:

Stakeholder Surveys

Baseline Forecasting Analysis

Inventory/Data Collection

Identification of Immediate Needs

PHASE 2

MIA Master Plan:

Capacity Assessments

Airfield, Terminal and Landside Simulation Modeling

PHASE 3 - Ongoing

MIA Master Plan:

2035 Facility Requirements

Market Assessment

Demand Scenario Analysis

General Aviation Airports:

Inventory, Forecasts and Demand/Capacity Assessments

Initiation of Long-Range Strategic Plan:

Initial Airport Asset Optimization Analysis

PHASE 4

Long Range Strategic Plan:

Demand Allocations Strategies

Long-Range Airport Concept Plans

Implementation Planning:

CIP Programming

Preliminary Plan of Finance

Airport Layout Plans Set

Environmental Screening; Preliminary Financial Feasibility Screening

Workshop Introduction and Objectives

Baseline Forecasts approved by Board of County Commissioners on November 5, 2010

Workshop's Objectives

- Analysis of political, socio-economic, air service market and airline policy changes susceptible of altering future demand volumes at MIA and development of alternative demand scenarios
- Determine which demand scenarios will be carried forward as part of the scenario forecast development

Consider the implication of growth differing from the Baseline Forecast on facility development needs or airport system-wide roles

Demand Scenarios

1. Baseline Forecasts
2. Reduced Passenger Demand Scenarios
   a. Decreased Hubbing Activity
   b. Fragmentation of International Service
   c. Oil and Aviation Fuel Price Elasticity
   d. Increased Environmental Regulation
3. Induced Passenger Demand Scenarios
   a. Unrestricted U.S. – Cuba Travel
   b. Increased Hubbing Activity
   c. High International Growth
4. Passenger Demand Scenarios with Uncertain Outcomes
   a. Regional Shift of South Florida Domestic O&D Demand
   b. Airline Mergers
5. Cargo Demand Scenarios
   a. Increased Connectivity Between Latin America and Asia
   b. Adjustment for Cargo Industry Recovery

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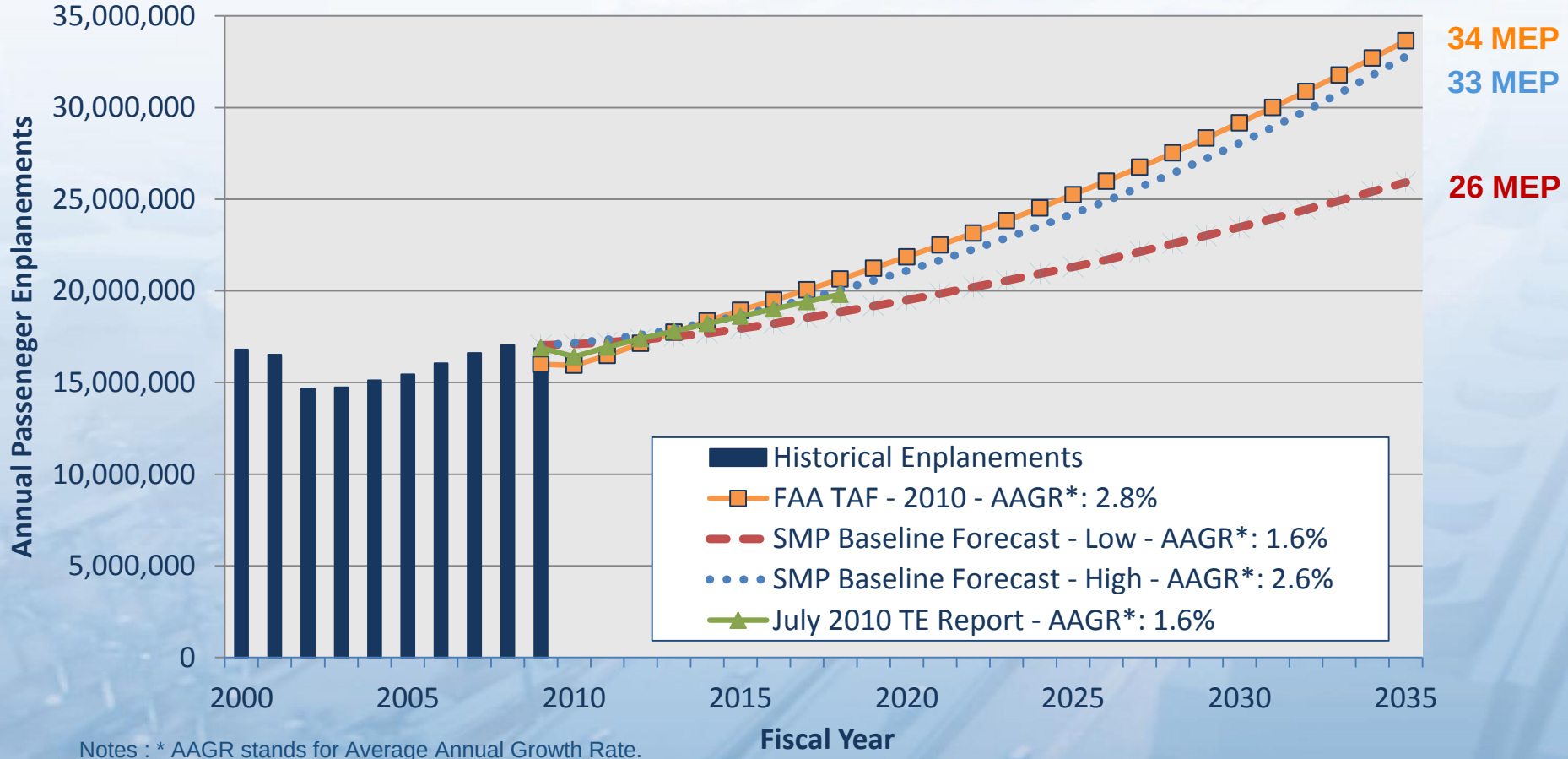
SMP Baseline Forecast
Annual Enplanements (Departing Passengers)

STRATEGIC AIRPORT MASTER PLANNING STUDY



Notes : * AAGR stands for Average Annual Growth Rate.
MEP stands for Millions Enplaned Passengers and MAP for Million Annual Passengers (Departing and Arriving).
Sources: Ricondo & Associates, Inc., February 2010; FAA 2010 TAF for MIA, published on December 2009; Report of the Traffic Engineers, July 2010.

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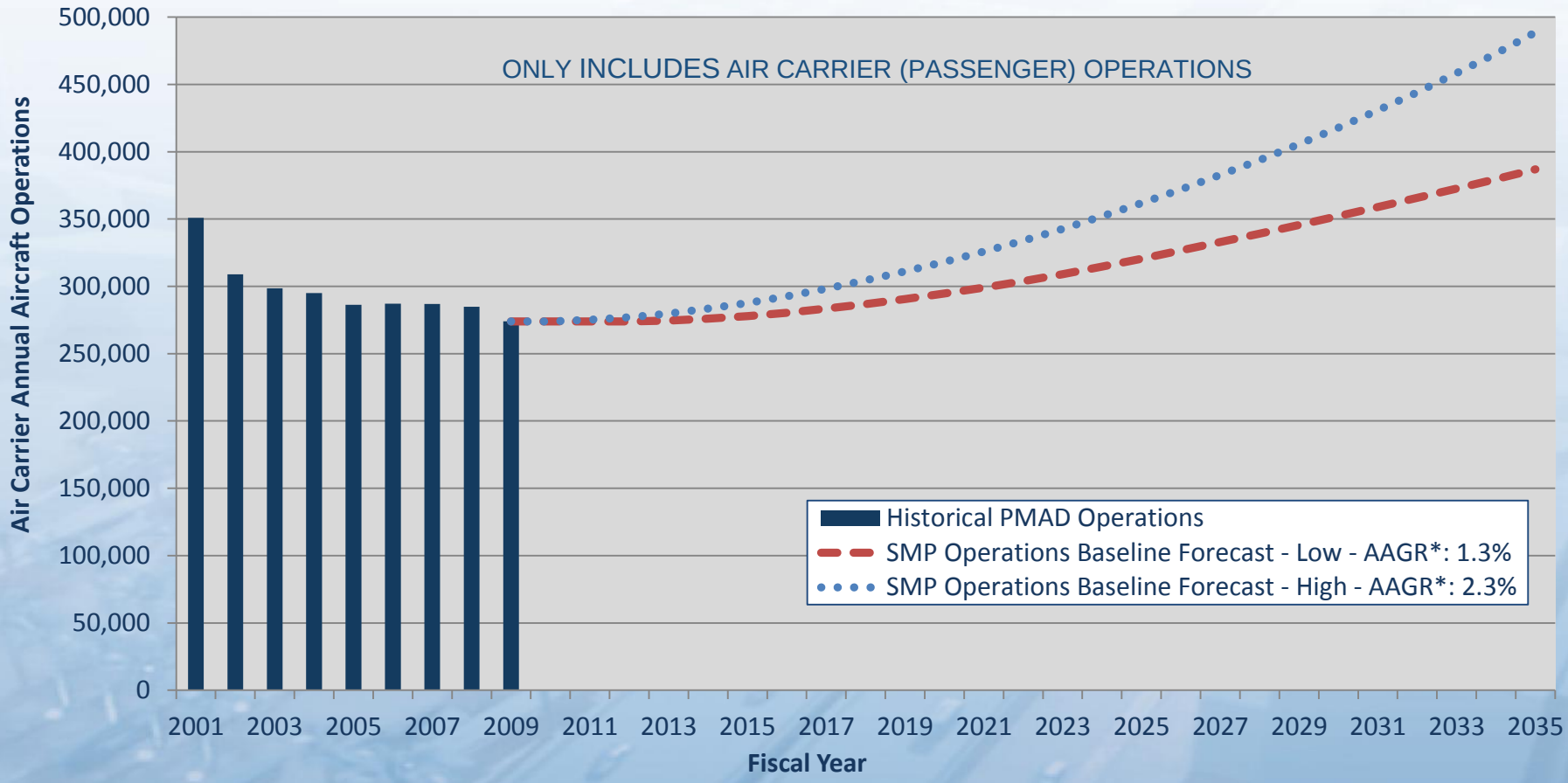
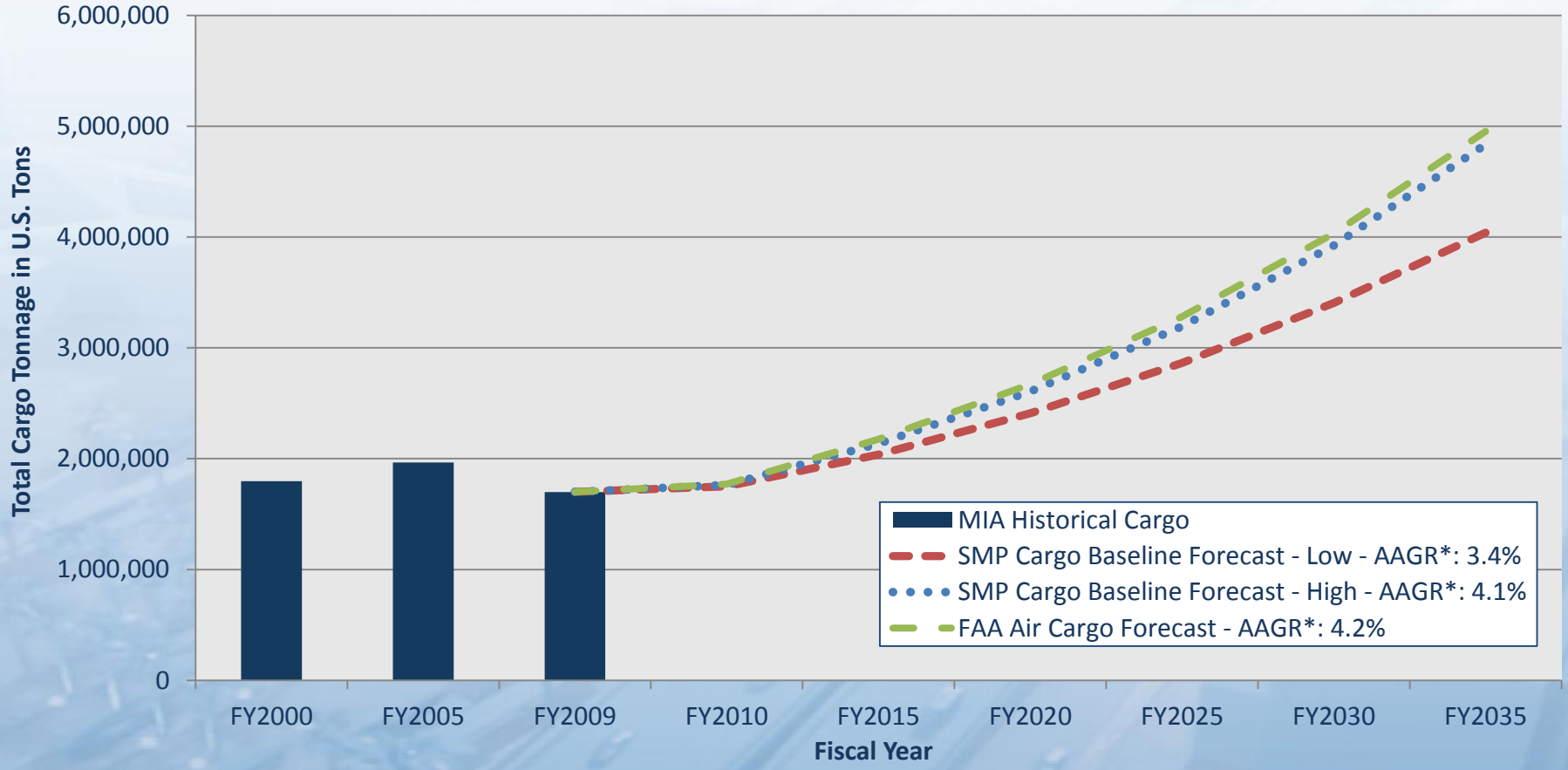
SMP Baseline Forecast
Annual Air Carrier Operations

STRATEGIC AIRPORT MASTER PLANNING STUDY



Note *: AAGR stands for Average Annual Growth Rate.
Source: Ricondo & Associates, Inc., February 2010.

SMP Baseline Forecast
Annual Air Cargo Tonnage



Sources: Webber Air Cargo, March 2010; FAA Aerospace Forecast FY2009-2025; World Air Cargo Forecast 2008-2009, The Boeing Company; Ricondo & Associates, Inc., February 2010.

REDUCED PASSENGER

DEMAND SCENARIOS

Decreased Hubbing Activity

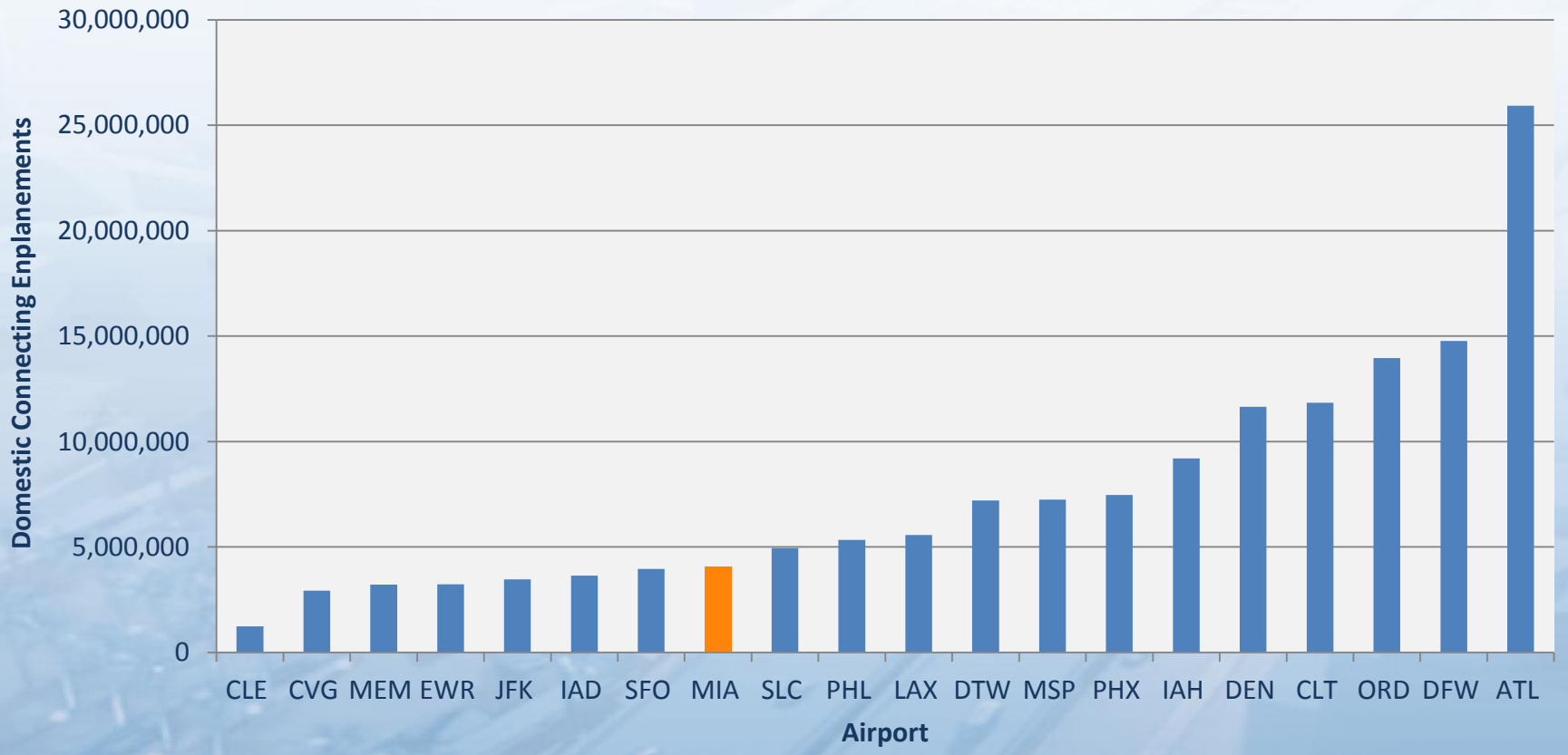
Reduced Hubbing Activity

- Reduced hubbing activity at an airport by an airline can generally be characterized into one of two categories
  - Unprofitable Market
  - Airline Mergers/Acquisitions
- Comparison of connecting domestic passenger levels
  - Low – 1.2 million (Continental Airlines at CLE)
  - MIA – 4.1 million (American Airlines)
  - High – 25.0 million (Delta Air Lines at ATL)
  - Other American Airlines hubs:
    - DFW – 14.8 million
    - ORD – 14.0 million
- The reduction in an airline's hubbing operation can also result in a reduction in local O&D passenger demand
- MIA's cost structure relative to other gateway airports could cause this to occur

Sources: FAA, Detailed 2009 TAF. Air Carrier Activity Information System, October 2010. Data Base Products, 2009. Bureau of Transportation Statistics, Research and Innovative Technology Administration, November 2010.

Reduced Hubbing Activity

Existing Domestic Connection Comparison (2009)



Sources: Data Base Products, 2009. Bureau of Transportation Statistics, Research and Innovative Technology Administration, February 2011.

Reduced Hubbing Activity

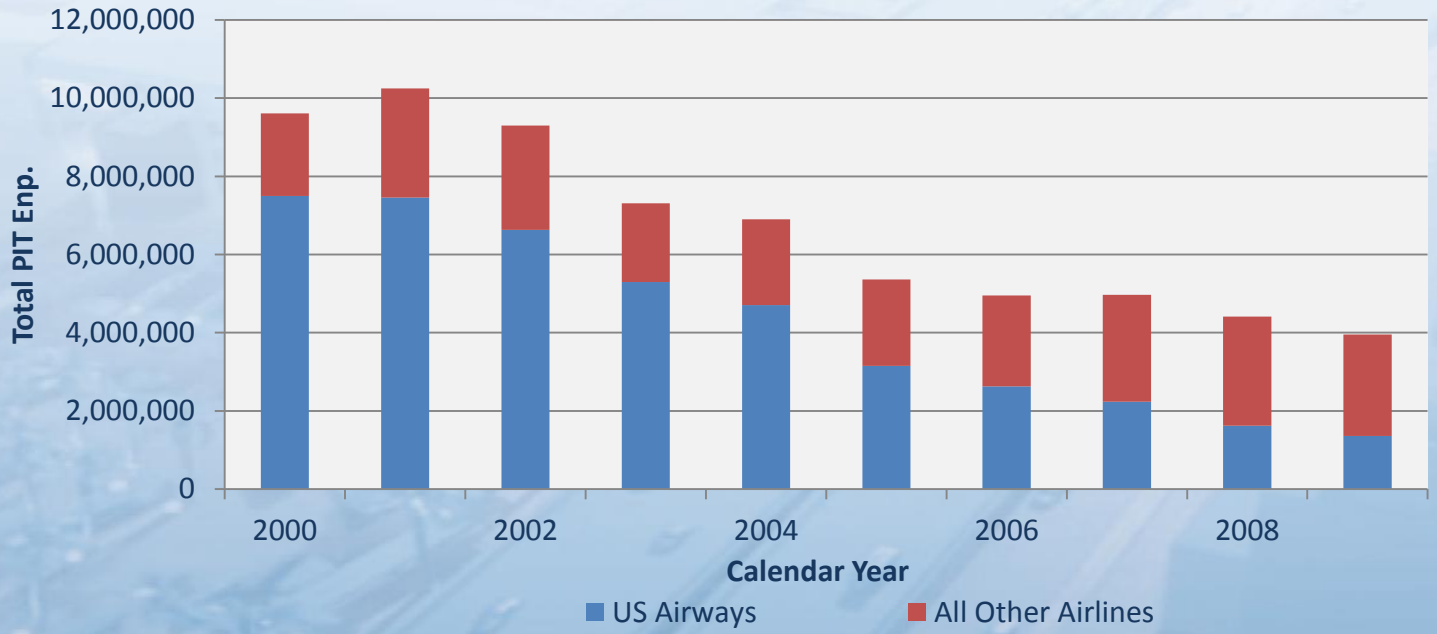
Airline Policy Changes

- Un-Profitable Hub/Change in Route Structure
  - Port Columbus Intl - America West Airlines
  - Pittsburgh Intl - US Airways
  - Dallas/Fort Worth – Delta Air Lines
  - Raleigh/Durham Intl - American Airlines
- Airline Mergers/Acquisitions
  - Lambert St. Louis Intl – TWA and American Airlines
  - Las Vegas Intl - America West Airlines and US Airways
  - Cincinnati/N. Kentucky Intl - Delta Air Lines and Northwest Airlines

Reduced Hubbing Activity

Airline Policy Changes

- Pittsburgh International Airport – US Airways
  - Total enplanements decreased from 10.2 million in 2001 to 4.0 million in 2009, a 61% decrease
  - US Airways share of passengers decreased from 70% in 2001 to 34% in 2009

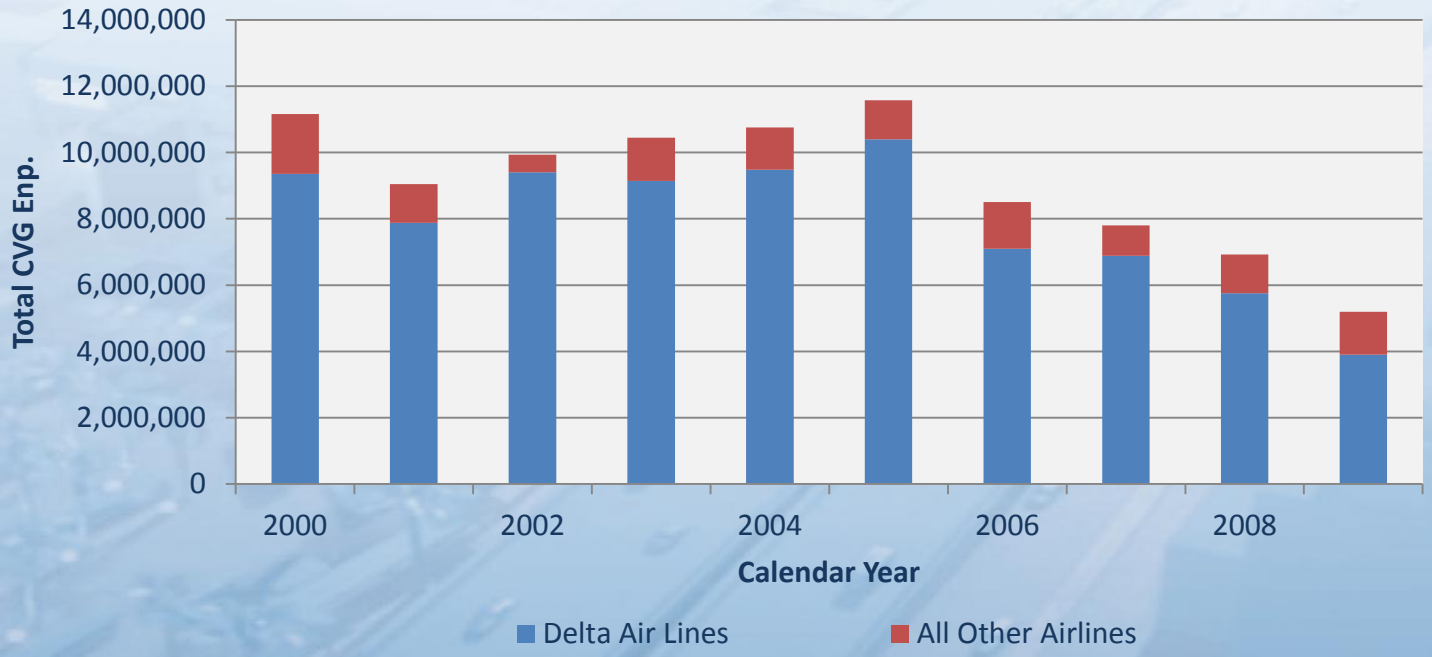


Sources: FAA, Detailed 2009 TAF. Air Carrier Activity Information System, October 2010. Data Base Products, 2009. Bureau of Transportation Statistics, Research and Innovative Technology Administration, November 2010.

Reduced Hubbing Activity

Airline Policy Changes

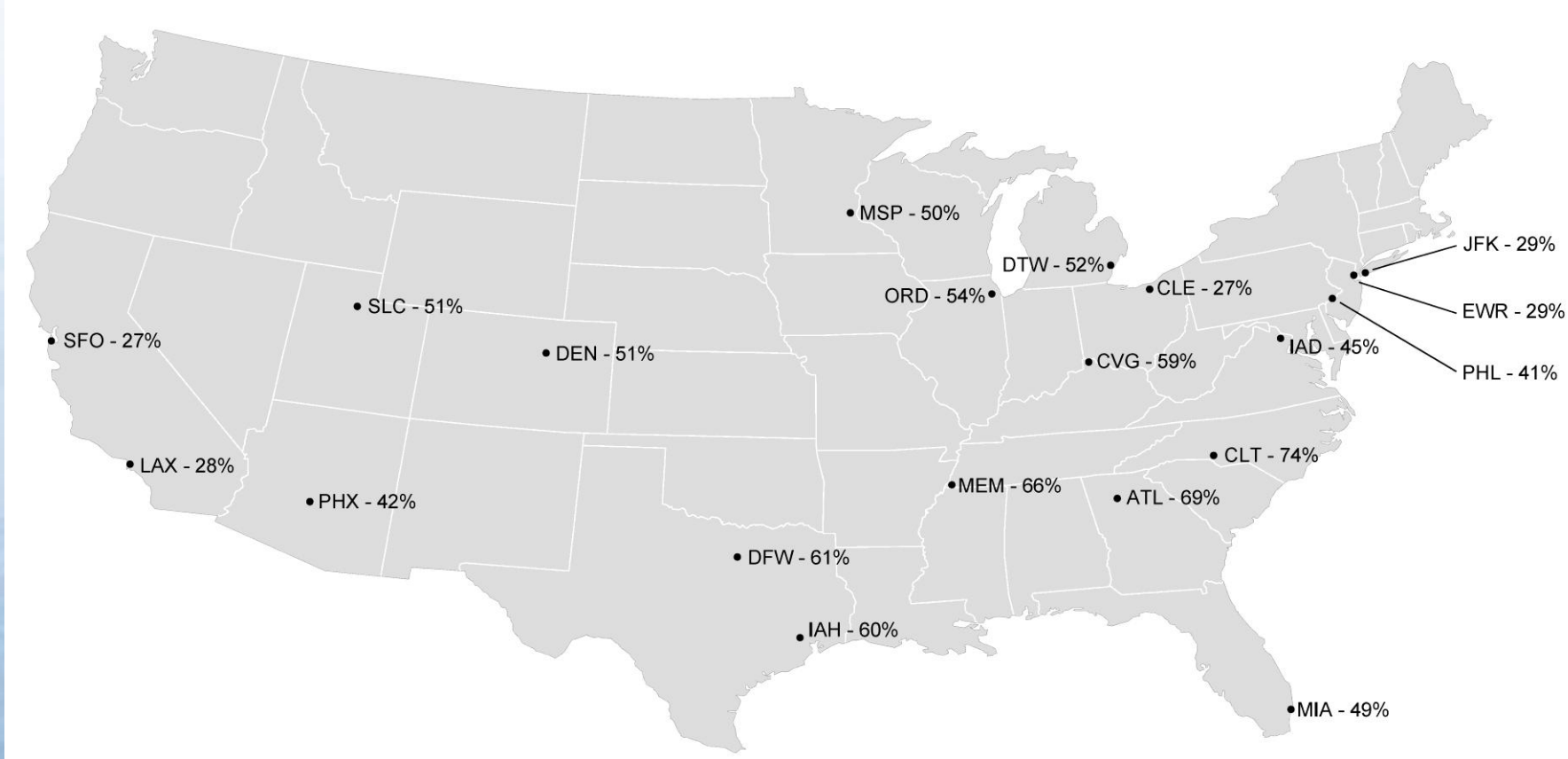
- Cincinnati International Airport – Delta Air Lines
  - Total enplanements decreased from 11.6 million in 2005 to 5.2 million in 2009, a 55% decrease
  - Delta share of passengers decreased from 90% in 2005 to 75% in 2009



Sources: FAA, Detailed 2009 TAF. Air Carrier Activity Information System, October 2010. Data Base Products, 2009. Bureau of Transportation Statistics, Research and Innovative Technology Administration, November 2010.

Reduced Hubbing Activity

Share of Domestic Connecting Passengers (2009)



Sources: Data Base Products, 2009. Bureau of Transportation Statistics, Research and Innovative Technology Administration, November 2010.

Fragmentation of International Service

Fragmentation of International Service

- Scenarios where foreign-flag carriers move international service to other airports:
  - International O&D passengers
  - Connecting passengers through gateway airports to domestic destinations
- International O&D passengers could be served by FLL, TPA, or MCO
  - Travel time considerations
- Foreign flag carriers could shift connecting passengers through other airports to more closely link to global alliance partners
  - Global airline alliances allow passengers to book travel around the world through a single airline although service may be on two or more alliance partners
  - There are three major alliances: oneworld, Star Alliance, and SkyTeam
  - MIA is predominately served by the oneworld alliance

Fragmentation of International Service

International O&D Passengers

- FLL has potential and limitations
  - Lower cost structure as measured by cost per enplanement (CPE):
    - FLL CPE is $5.00 vs. MIA CPE of $15.98 (2009)
    - Projected 2017 CPE is $11.00 for FLL vs. $31.99 for MIA (note that FLL CPE does not include terminal expansion from 66 to 79 gates)
  - Airfield and gate capacity will be constrained until completion of the capital improvement program
  - FLL's longest runway (9L-27R) is 9,000 feet long
    - Due to aircraft range limitations, FLL could not serve long range international markets to Europe and deep Latin America.
    - Potential FLL market expansion to U.S., Caribbean, Central America, and northern portions of South America

Fragmentation of International Service

Foreign-Domestic Air Carrier Connections

- Foreign flag carriers connecting passengers to domestic destinations
  - 26 foreign flag carriers operating at MIA transport at least 10,000 passengers to/from the U.S. every month
    - 15 belong to one of the three major airline alliances (oneworld, Star Alliance, and Skyteam)
    - 5 more are anticipated to join one of the alliances in the near future
    - Aligned carriers accounted for 1.5 million enplanements in 2009 (9.3% of MIA's enplanements)
    - Aligned and future aligned carriers accounted for 2.1 million enplanements in 2009 (13.0% of MIA's enplanements)

Fragmentation of International Service

Foreign-Domestic Air Carrier Connections

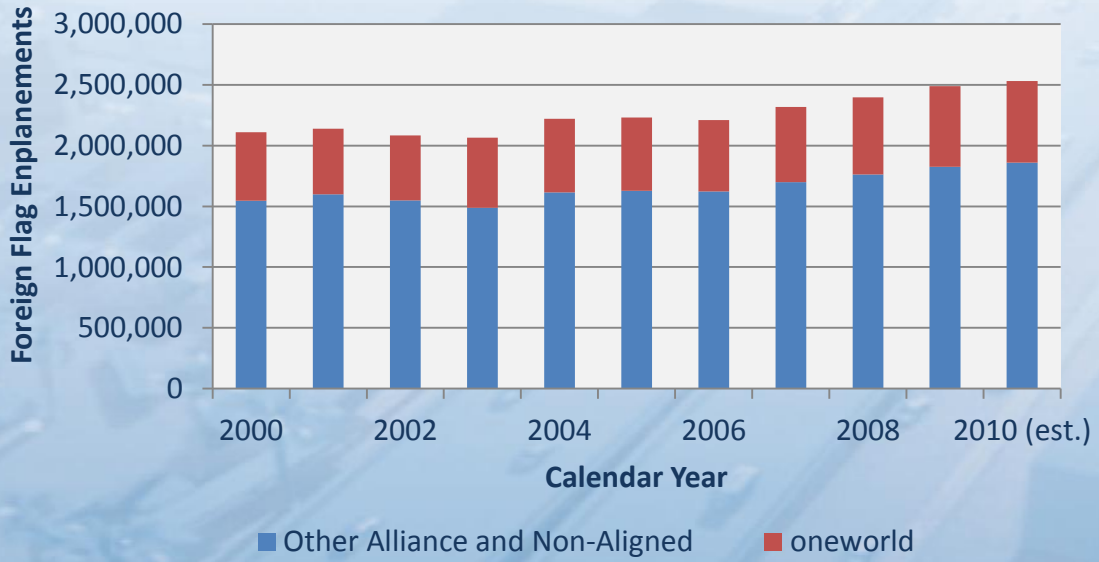
- 26 foreign flag carriers operating at MIA transport at least 10,000 passengers to/from the U.S.A every month
- oneworld – American Airlines
  - LAN (Peru, Chile, Argentina, Ecuador)
  - British Airways
  - Iberia
  - Finnair
- Star Alliance – Continental Airlines, United Airlines and US Airways
  - TAM Brazilian Airlines
  - Lufthansa
  - Air Canada
  - Swiss International Air Lines
- SkyTeam – Delta Air Lines
  - Air France
  - Alitalia
  - Air Europa
  - AeroMexico

Source: Bureau of Transportation Statistics, Research and Innovative Technology Administration, November 2010.

Fragmentation of International Service

Foreign-Domestic Air Carrier Connections

- As alliances increase, ultimately to the point where the majority of airlines worldwide are included, the threat to MIA's international service increases
- Foreign flag carriers may overfly MIA for other international gateways in order to funnel connections to their domestic airline partners
- These airports could include: Atlanta, Orlando, Dallas/Ft. Worth, Houston



Note: 2010 estimated

Source: Bureau of Transportation Statistics, Research and Innovative Technology Administration, November 2010.

Fragmentation of International Service

Cost Per Enplanement Comparison

Sources: Airport budgets, CAFR, and Official Statements compiled by Ricondo & Associates, Inc., March 2010.

Oil and Aviation Fuel Price Elasticity

Oil and Aviation Fuel Pricing Elasticity

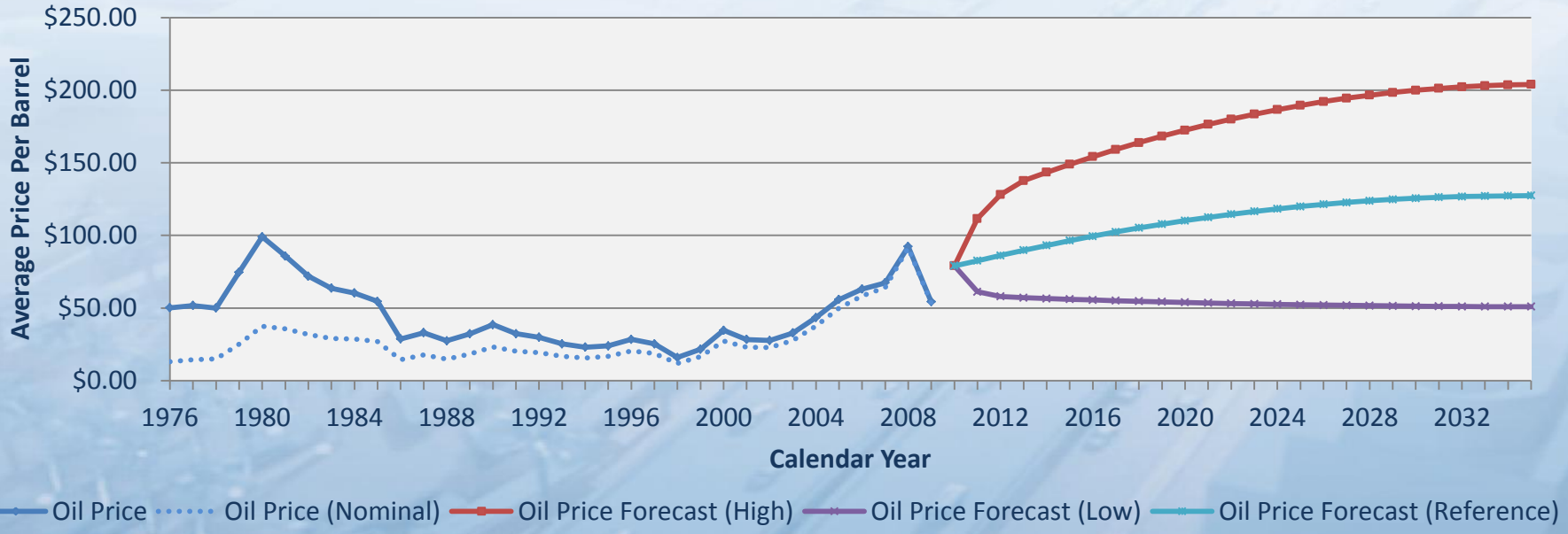
- Consistently low oil prices from the late 1980s to late 1990s, in conjunction with Airline Deregulation, stimulated the development of air travel in the U.S.
- On average, from 1998-2008 the yearly average price of a gallon of Jet-A increased 17.1% per year ($0.40 to $2.96)[1/]
  - At a consumption rate of 18-20 billion gallons per year, each $0.01 increase results in an additional $180-200 million in additional fuel costs [2/]
- Historical data shows no obvious correlation between:
  - Price of oil and average fare
  - Average fare and number of enplanements
  - Price of oil and number of enplanements
- The price of oil typically relates to the state of the economy
  - The price of oil tends to increase during periods of economic growth
  - Peaks in the economy generally coincide with periods of high air travel
- We are now seeing sustained oil prices above $100

Notes: 1/ Inflation adjusted 2009 dollars

2/ Air Transport Association, *Fuels 101: Airline Energy Q&A*

Oil and Aviation Fuel Pricing Elasticity

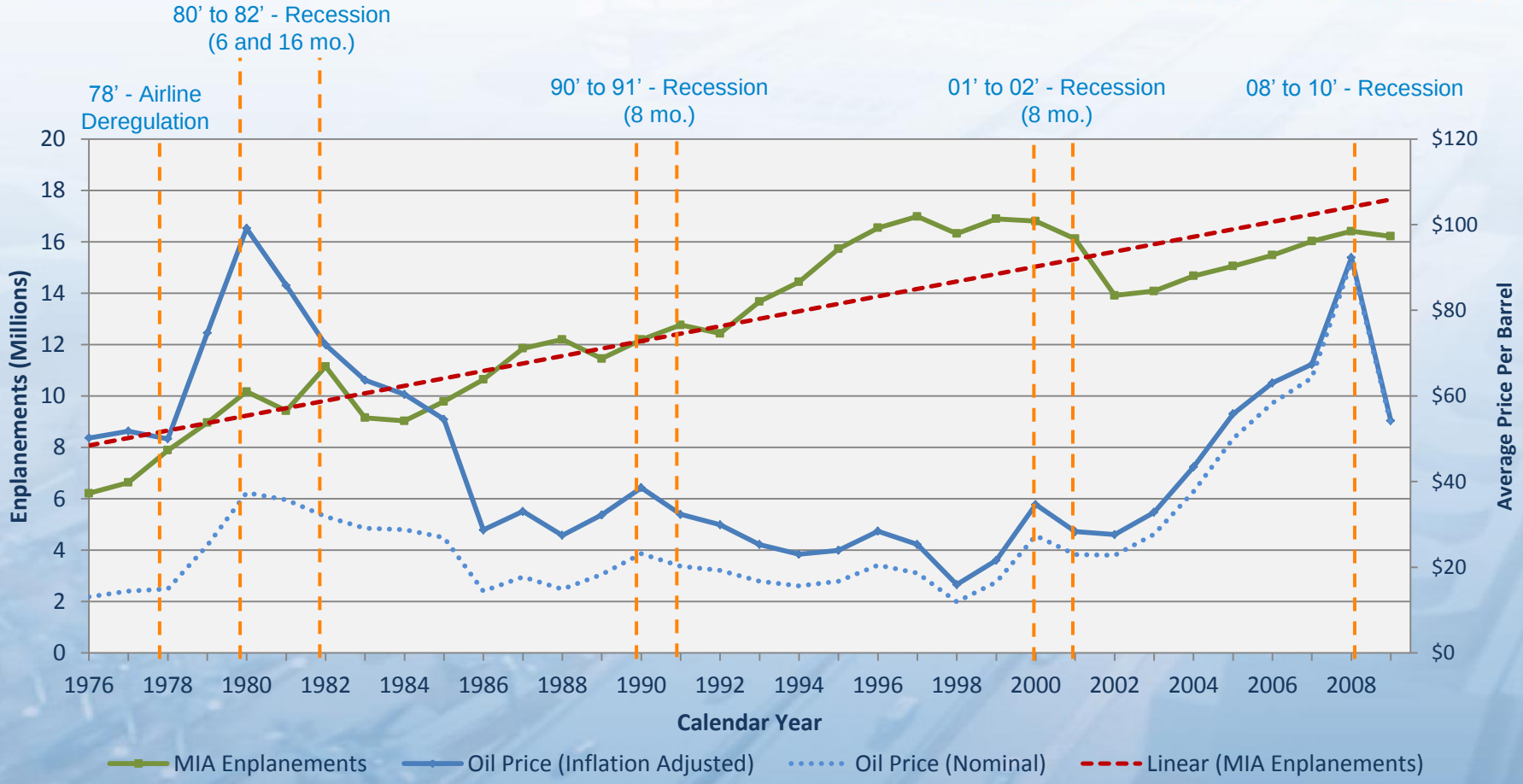
- Several key trends may transpire to keep oil prices high in the mid to long term
  - Emergence of China and India as major energy consumers
  - Geopolitical tension in some oil exporting regions
  - Saturation and maturity of major oil fields



Note: All non-nominal values are expressed in 2009 Dollars.

Sources: InflationData.com, December 2010; World Economic Forum, *The Travel & Tourism Competitiveness Report*, 2009; U.S. Energy Information Administration, *Annual Energy Outlook 2011 with Projections to 2035;* December 2009.

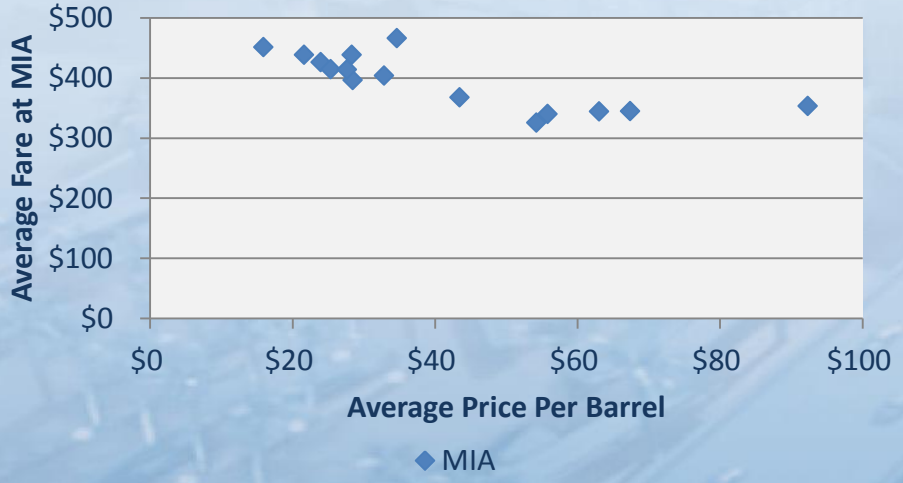
Oil and Aviation Fuel Pricing Elasticity



Sources: InflationData.com, December 2010; The National Bureau of Economic Research, September 2010; FAA, Detailed 2009 TAF. Air Carrier Activity Information System, October 2010.

Oil and Aviation Fuel Pricing Elasticity

- High oil prices result in increased operating costs, which can be passed on to consumers
  - At a consumption rate of 18-20 billion gallons per year, every penny increase in the price of a gallon of jet fuel drives an additional $180-200 million in annual fuel costs for U.S. Airlines
- Higher fares do not always correlate with lower passenger volumes
  - Depends on price sensitivity



Note: All values are annual averages for 1995-2009 and are expressed in 2010 Dollars.

Sources: Thomson Reuters, November 17, 2010; Bureau of Transportation Statistics, November 29, 2010; World Economic Forum, *The Travel & Tourism Competitiveness Report*, 2009. Air Transport Association, *Fuels 101*.

Increased Environmental Regulation

Increased Environmental Regulation

- Environmental issues that can affect capacity include:
  - Aircraft Noise
  - Local Air Quality
  - Third Party Risk
  - Ecological and Habitat Impacts
  - Climate Change
  - Ability to secure adequate supplies of utilities or removal of waste

Source: Center for Aviation Transport and the Environment, *The Concept of Airport Environmental Capacity,* October 2002.

Increased Environmental Regulation

- After aircraft noise, local air quality was deemed the most significant environmental issue that has the potential to constrain airport capacity
  - Apart from aircraft movements, the major sources of emissions associated with airports are road traffic, refueling and apron activities.
  - The European Union has developed a framework that establishes air quality management zones that introduce targets and mandatory limits for local air quality. Prior to implementation, modeling suggested a number of major airports may reside in zones which could fail to meet mandatory limits and as a result face growth constraints.

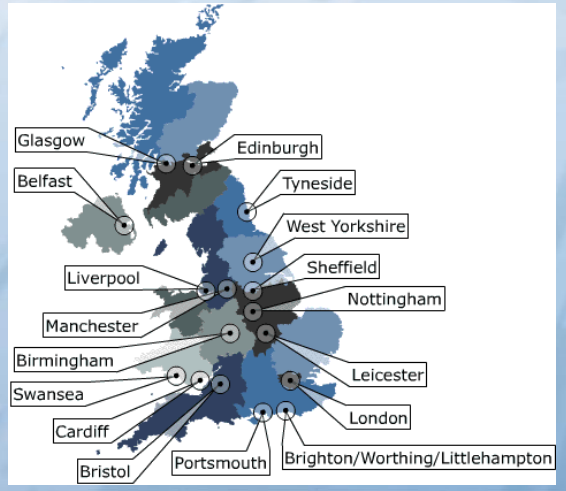
Source: Center for Aviation Transport and the Environment, *The Concept of Airport Environmental Capacity,* October 2002.

Increased Environmental Regulation

European Union Air Quality Standards

- Member States divide their territory into a number of zones and agglomerations (urban areas)
- Each zone is assessed based on EU Air Quality Standards
- Member States face legal action over incompliant zones
  - Legal Process
    1. Letter of Formal Notice (First Written Warning)
    2. Reasoned Opinion (Second Written Warning)
    3. Court of Justice Summons
    4. Final Written Warning
    5. Financial Penalties
  - Member states can request exemption/extension
  - UK Government received second written warning regarding air quality in London and could end up paying as much as £300 million ($480 million) in fines for continually exceeding the prescribed limits

Pollutant	Legal nature
Fine articles (PM2.5)	Target - 1.1.2010 Limit - 1.1.2015
Sulfur dioxide (SO_2)	Limit - 1.1.2005
Nitrogen dioxide (NO_2)	Limit - 1.1.2010
PM10	Limit - 1.1.2005
Lead (Pb)	Limit - 1.1.2005
Carbon monoxide (CO)	Limit - 1.1.2005
Benzene	Limit - 1.1.2010
Ozone	Target - 1.1.2010
Arsenic (As)	Target - 1.1.2012
Cadmium (Cd)	Target - 1.1.2012
Nickel (Ni)	Target - 1.1.2012
Polycyclic Aromatic Hydrocarbons	Target - 1.1.2012



Sources: European Commission, Environment, May 17, 2010; BBC News, *UK receives 'final warning' over air pollution,* June 3, 2010.

Increased Environmental Regulation

Stockholm-Arlanda, Sweden

- Permit/lease to use the land will limit CO_2 and NOx emissions to 1990 levels (effective mid-2011)
  - Operations Related to Running the Airport
    - Ground Traffic within the airport area
    - Energy production, space heating and cooling
  - Air Traffic
    - Landing and take-off cycles
  - Ground Transportation
    - Passengers to/from the airport
    - Employees to/from the airport
    - Air cargo, mail and other goods to/from the airport

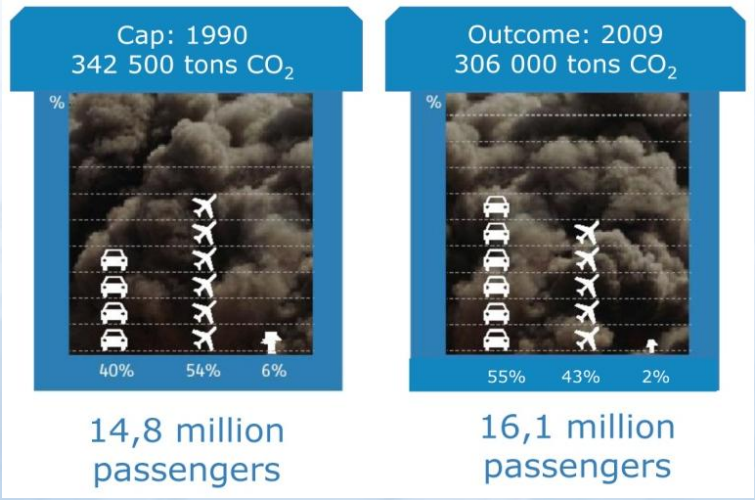
Environmental Initiatives
Environmentally Based Take-off and Landing Charges
“Green” Approaches (Continuous Decent Approach)
“Eco-Driving” Training for Employees
Priority Access for Eco-Taxis
District Heating using Biofuels
District Cooling using a Nearby Lake
Biogas-Fueled Busses
CO_2 Offset Credits

Sources: Stockholm-Arlanda Environmental Permit Consultations, October 30, 2009; *Arlanda the first airport to meet the Airport Carbon Accreditation’s highest standard,* November 2010.

Increased Environmental Regulation

Stockholm-Arlanda, Sweden

- Immediate response has mainly focused on non-aviation related emissions
  - First ACI-E Accredited Carbon Neutral Airport
  - Current emissions levels are less than 1990 levels
- Currently applying for new environmental permit



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INDUCED PASSENGER DEMAND SCENARIOS

Unrestricted U.S.-Cuba Travel

Unrestricted U.S.-Cuba Travel

Potential demand for travel to Cuba from Miami International Airport resulting from the U.S. government lifting the ban on travel by U.S. residents to Cuba

- Estimation of travel demand to Cuba, in the absence of U.S. travel restrictions, assumes a hypothetical normalization of Cuba – U.S. relations.
- Abolishment of the following regulations would allow U.S. carriers to provide regularly scheduled air service to Cuba:
  - Cuban Assets Control Regulations established in 1963
  - Cuban Liberty and Democratic Solidarity Act of 1996 (Helms-Burton Act)
- Cuban government would not restrict the number of travel visas issued for its citizens

Unrestricted U.S.-Cuba Travel

Assumptions:

- It becomes legal for all U.S. residents to travel to Cuba, all other aspects of the broader trade embargo are removed
- U.S. air carriers would be allowed to transport passengers to Cuba on a scheduled basis
- Bilateral air service agreement between the U.S. and Cuba is maintained

Unrestricted U.S.-Cuba Travel

Three travel purposes:

- Family/humanitarian travel - similar to that allowed under current restrictions, stable over the long-term
- Tourist travel - growth as resorts are developed or expanded
- Business travel - growth as business relationships are formed between U.S. and Cuba or as redevelopment of infrastructure and/or facilities throughout the Island is undertaken by U.S. Companies

Three segments of passenger demand:

- Local origin & destination passengers – between the South Florida market and Cuba
- Transfer or connecting passengers – MIA as an established gateway to the Caribbean
- Short-term demand surge – interest in Cuba as the “unknown” could result in an initial surge in travel

Increased Hubbing Activity

Increased Hubbing Activity

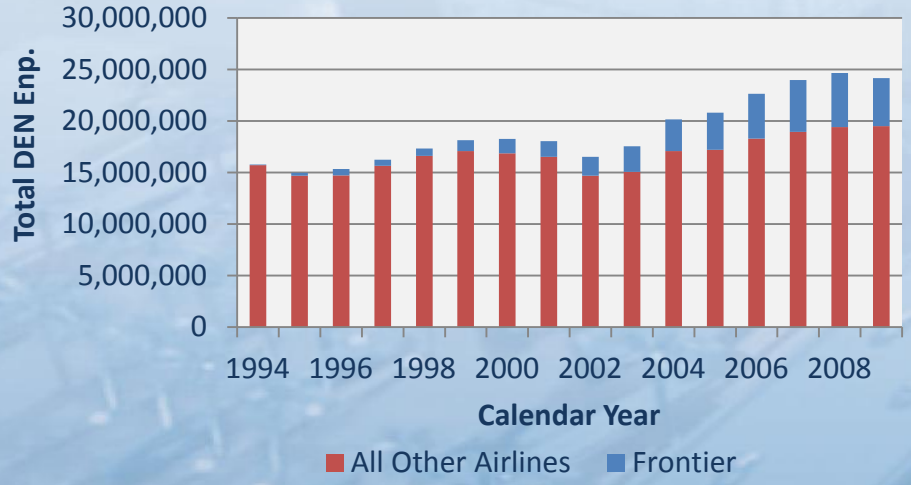
- Scenario A: U.S. flag carrier initiates hubbing operation at MIA
  - Only two airports serve as a hub for two legacy carriers
    - LAX (United, American)
    - ORD (United, American)
  - Most low cost carriers tend to utilize a point-to-point structure supported by “focus cities”
  - Examples are:
    - AirTran at Atlanta (merging with Southwest Airlines)
    - Frontier at Denver
    - JetBlue at JFK
- Scenario B: Current hubbing carrier (American) expands existing hub

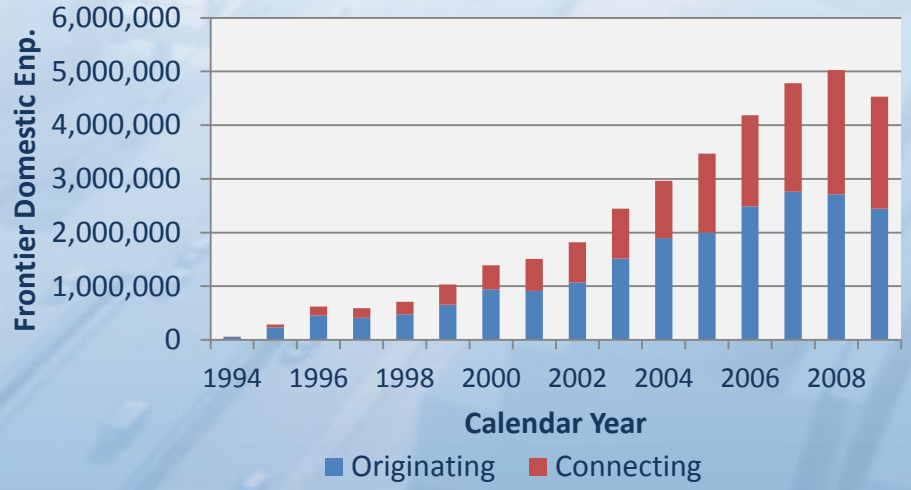
Increased Hubbing Activity

Startup Airlines

- Denver Intl – Frontier Airlines
  - Began Operations in July 1994
  - Average Year over Year Change 1994-2009
    - DEN Less Frontier Connections: 2.4%
    - Total DEN: 3.0%
    - Total Frontier: 46.5%

- Frontier Connecting Share
  - 1994: 12.1%
  - 2009: 46.0%





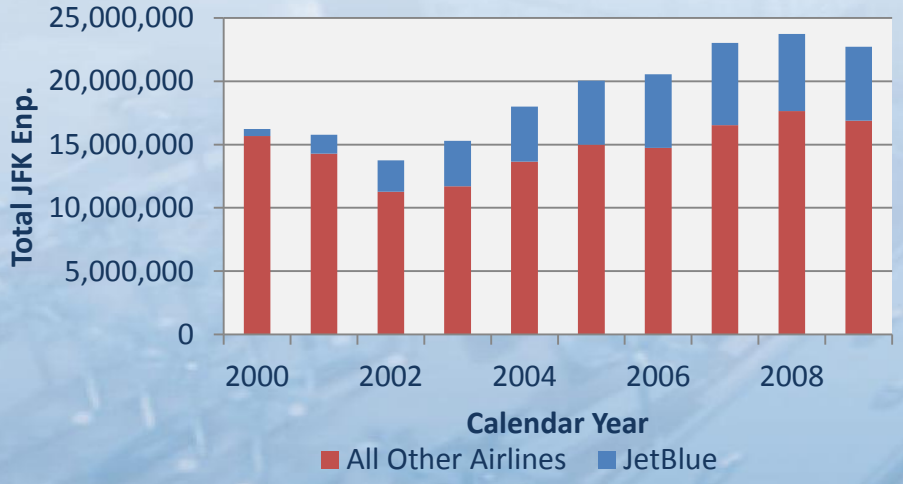
Note: Connecting and Originating statistics for domestic passengers only.

Sources: FAA, Detailed 2009 TAF. Air Carrier Activity Information System, October 2010. Data Base Products, 2009. Bureau of Transportation Statistics, Research and Innovative Technology Administration, November 2010.

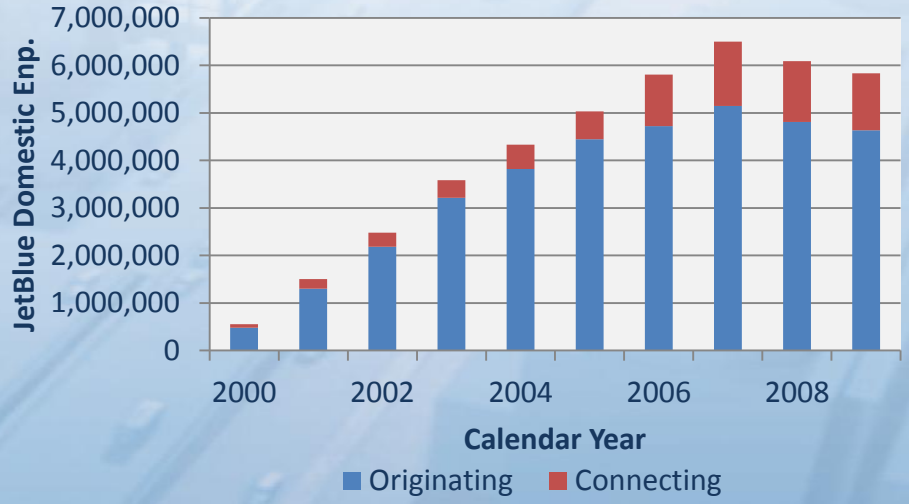
Increased Hubbing Activity

Startup Airlines

- John F. Kennedy Intl - JetBlue Airways
  - Began operations in February 2000
  - Average Year over Year Change 2000-2009
    - JFK less JetBlue Connections: 3.8%
    - Total JFK: 4.2%
    - Total JetBlue: 37.1%



- JetBlue Connecting Share
  - 2000: 13.9%
  - 2009: 20.6%



Note: Connecting and Originating statistics for domestic passengers only.

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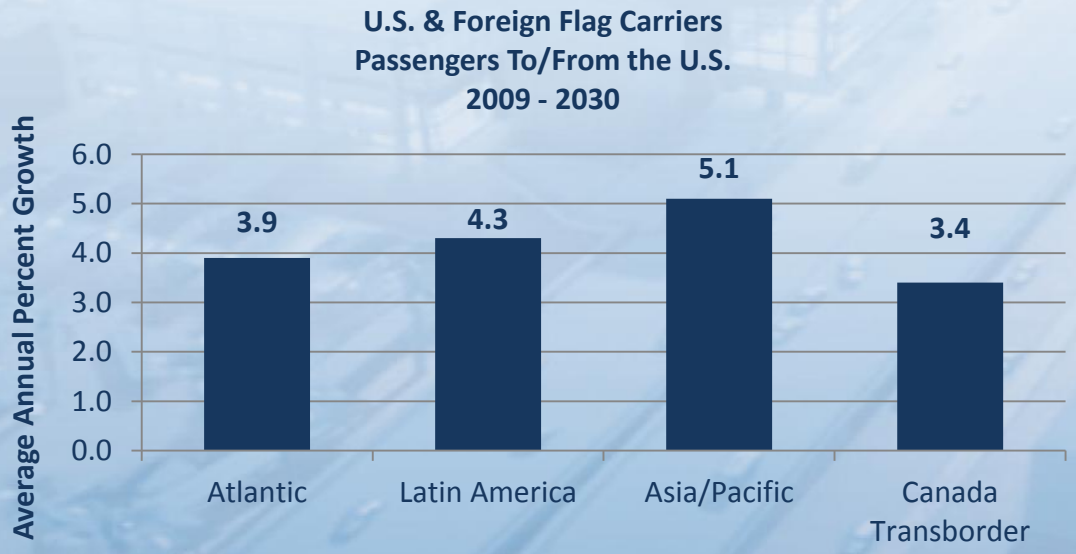
High International Growth

High International Growth

The U.S. Legacy carriers have turned to international routes to stimulate growth

- Driven by higher margin passengers

The 2010 FAA Aerospace Forecast identifies long-term growth rates by international regions



Source: FAA Aerospace Forecast, Fiscal Years 2010-2030.

High International Growth

New service announcements from the U.S. to Asia, Africa, and South America

With AA presence in the Central and South American markets, Far East, Middle East, and North Africa represent the highest potential for expanded routes under a high international growth scenario

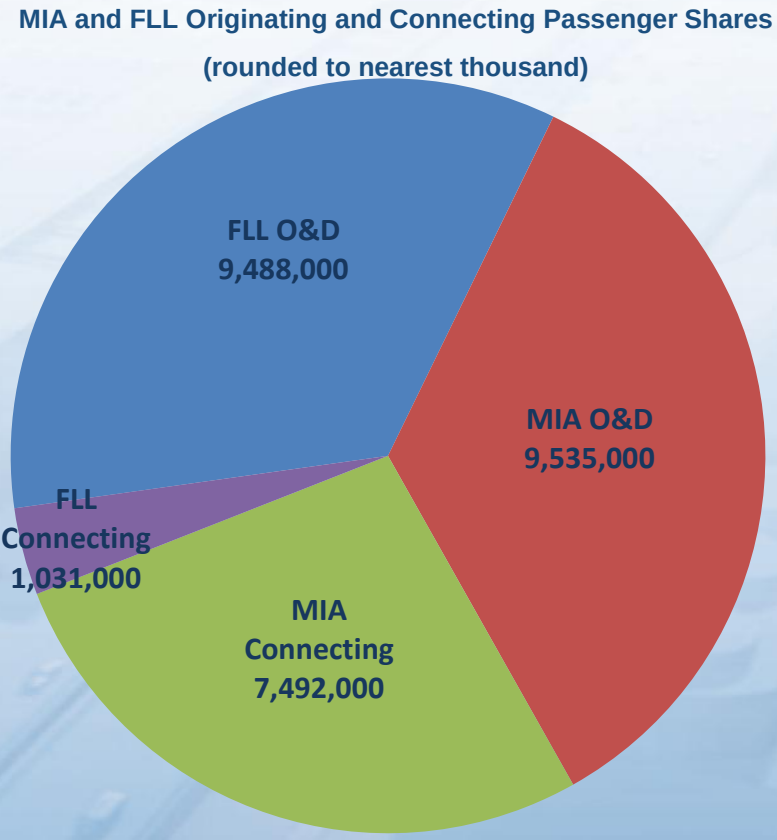
PASSENGER DEMAND SCENARIOS WITH UNCERTAIN OUTCOMES

Regional Shift of South Florida Domestic O&D Market

Regional Shift of Domestic O&D Demand

The South Florida Market

- The introduction of Low-Cost Carriers at FLL in the mid 1990's has drawn an increasing number of O&D passengers from South Florida
- Since 1995, FLL had a 5.5% average year over year change in originating passengers. MIA during the same time period was -1.5% per year
- Based on 2009 data, the combined O&D passenger demand for South Florida is 19.0 million enplanements



Sources: Landrum & Brown Team, *Fort Lauderdale-Hollywood International Airport Environmental Impact Statement*, June 2008; Federal Aviation Administration, Detailed 2010 TAF, MIA Airport Activity Records.

Regional Shift of Domestic O&D Demand

Route Overlap

- Originating Passenger Itineraries
  - 349 Destination Cities from MIA
  - 357 Destination Cities from FLL
  - 323 Destination City Overlap
    1. New York
    2. Chicago
    3. Atlanta
    4. Newark
    5. Los Angeles
    6. Washington ,D.C.
    7. Boston
    8. Philadelphia
    9. San Juan, P.R.
    10. San Francisco

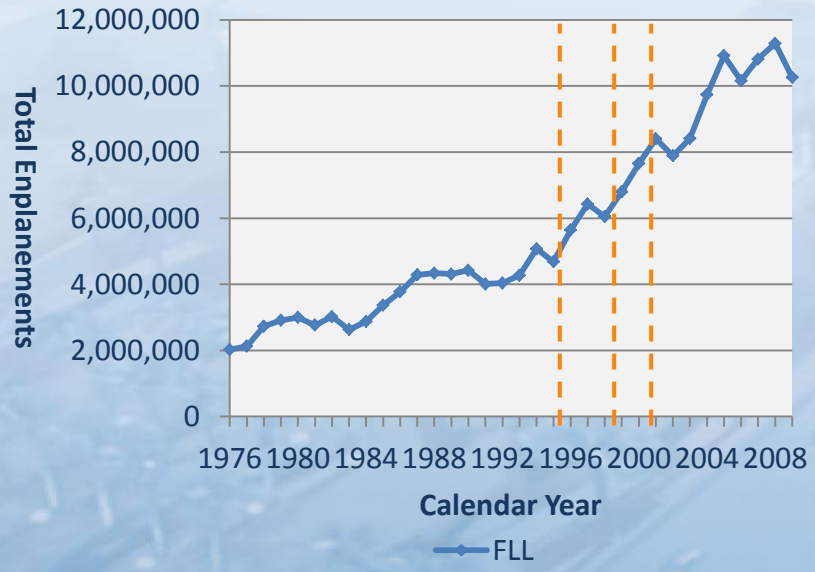
- Non-Stop Itineraries (May Not be Originating)
  - 100 Destinations from MIA
  - 110 Destinations from FLL
  - 74 Destination City Overlap
    1. New York
    2. Atlanta
    3. Chicago
    4. Dallas/Ft. Worth
    5. Washington, D.C.
    6. Los Angeles
    7. San Juan, P.R.
    8. Orlando
    9. Newark
    10. Boston

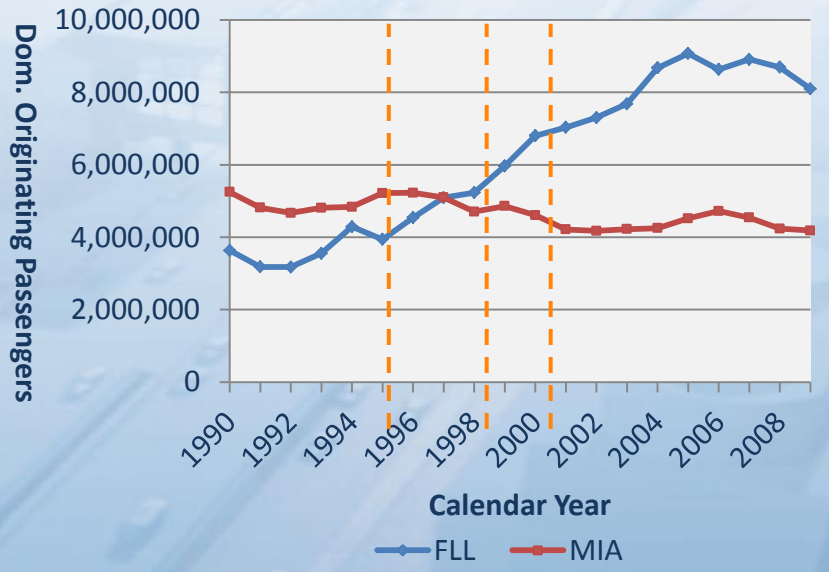
Sources: Data Base Products, 2009. Bureau of Transportation Statistics, Research and Innovative Technology Administration, November 2010.

Regional Shift of Domestic O&D Demand

Low-Cost Carriers

- The development of Low-Cost Carriers at FLL generated rapid growth during the late 1990's and early 2000's
  - Southwest Airlines (1996)
  - Spirit Airlines (1999)
  - jetBlue (2001)
- During the same time period, MIA experienced a decline in Domestic Originating Passengers





Sources: FAA, Detailed 2009 TAF. Air Carrier Activity Information System, October 2010; Data Base Products, 2009.

Regional Shift of Domestic O&D Demand

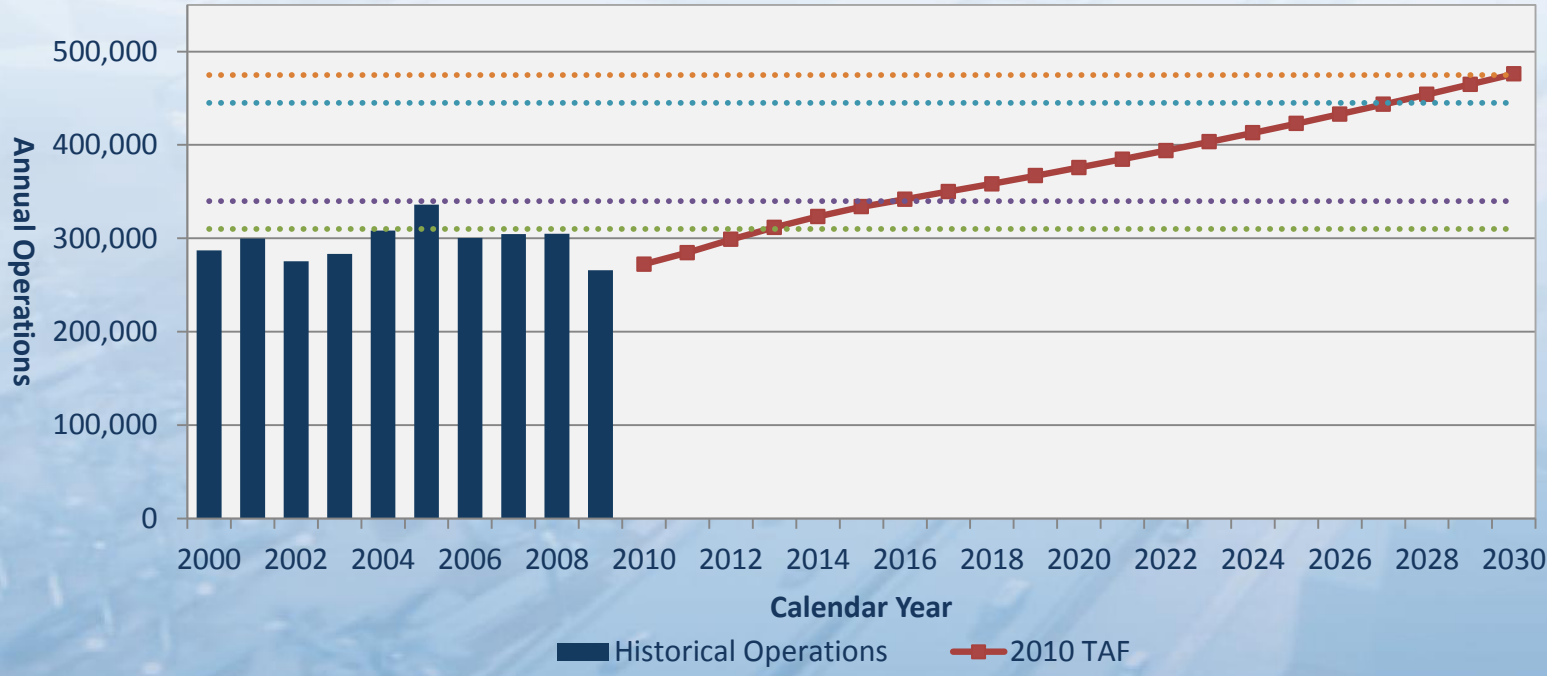
- Existing airfield capacity of FLL is 310,000-340,000 operations (6-10 minute delay)
  - 310,000 exceeded in 2013
  - 340,000 exceeded in 2016
- Commissioning of FLL's new Runway 9R-27L anticipated on September 18, 2014, increasing annual capacity to 445,000-475,000 operations (6-10 minute delay)
  - 445,000 exceeded in 2028
  - 475,000 exceeded in 2030
- No additional runway development is currently planned at FLL
- The 2008 FLL Master Plan Update is focused on terminal expansion alternatives
  - Planned increase from 57 to 79 gates
  - Increased gate utilization from 5 to 7 daily departures per gate

Sources: FAA, Detailed 2010 TAF. Air Carrier Activity Information System, October 2010. Fort Lauderdale – Hollywood International Airport Expansion Program, August 6, 2010.

Regional Shift of Domestic O&D Demand

Fort Lauderdale Capacity - Operations

Airfield Layout	Annual Capacity (Ops.)		Year Capacity Surpassed	
	6 Minute Delay	10 Minute Delay	6 Minute Delay	10 Minute Delay
Existing	310,000	340,000	2013	2016
Future	445,000	475,000	2028	2030



Sources: Landrum & Brown Team, *Fort Lauderdale-Hollywood International Airport Environmental Impact Statement*, June 2008; Federal Aviation Administration, Detailed 2010 TAF.

Airline Mergers

Airline Mergers

Recent airline mergers

- US Airways-America West (2005)
- Delta-Northwest (2009)
- Frontier-Midwest (2010)
- United-Continental (approved 2010, merger underway)
- Southwest-AirTran (approved May 2, 2011, merger underway)

Further consolidation is likely

American Airlines is a possible participant

- Other merger partners may include Alaska Airlines, JetBlue, or US Airways

Mergers may eliminate a few overlapping routes from MIA, but would not be expected to drastically change passenger levels

CARGO DEMAND SCENARIOS

Increased Connectivity Between Latin America and Asia

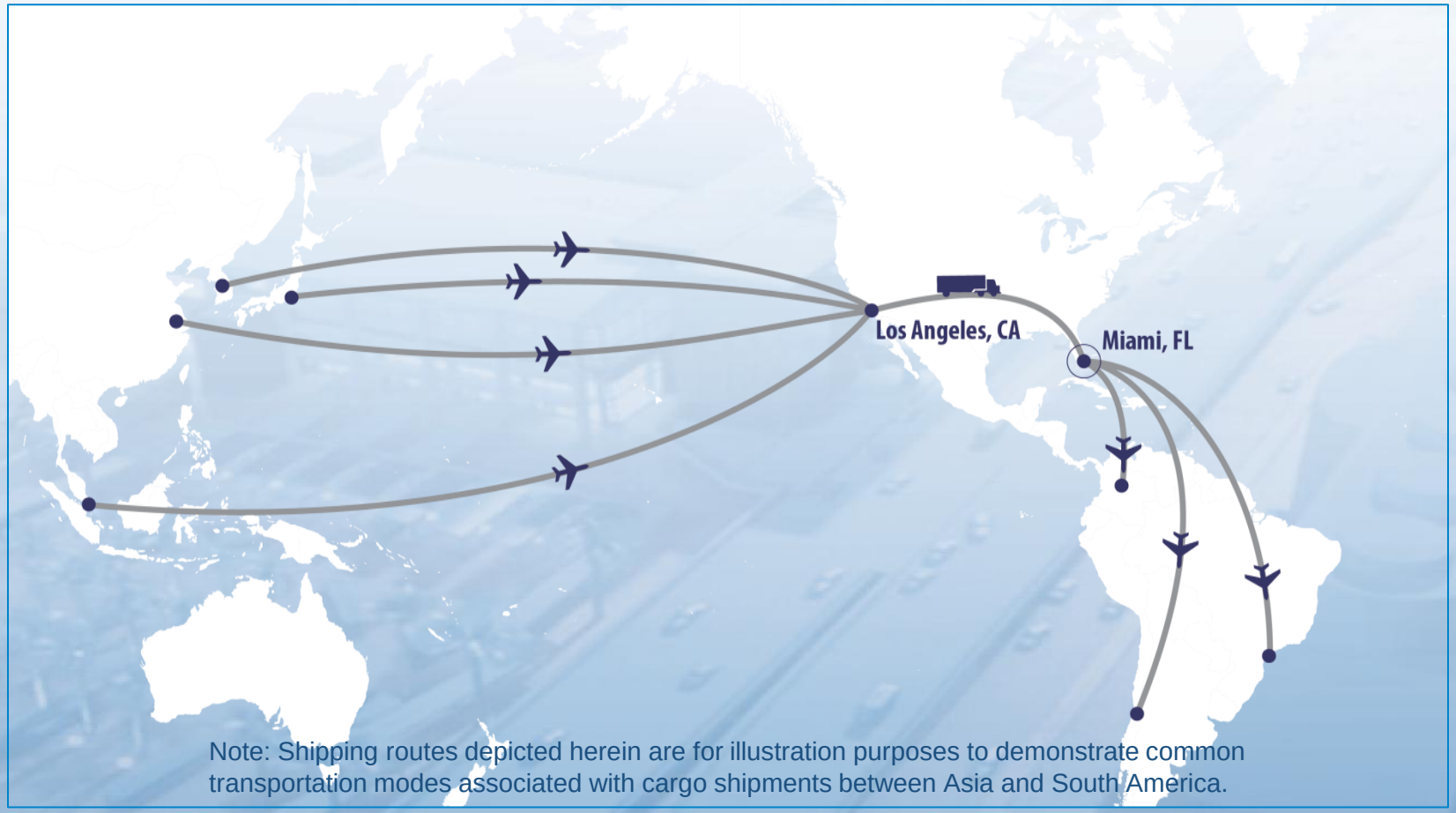
Increased Connectivity Between Latin America & Asia

- Increased tonnage to/from Latin America and Asia is already included in the baseline forecast
- Over 50% of southbound shipments from MIA to Latin America may be of Asian origin
  - Relatively little of these shipments are carried by Asian cargo carriers
  - Currently, Asian originating cargo destined to Latin America is primarily shipped to MIA from west coast ports via dedicated trucking services
- If new service linking Asia occurs earlier in the forecast period than would happen organically, cargo growth at MIA may be greater than anticipated

Increased Connectivity Between Latin America & Asia

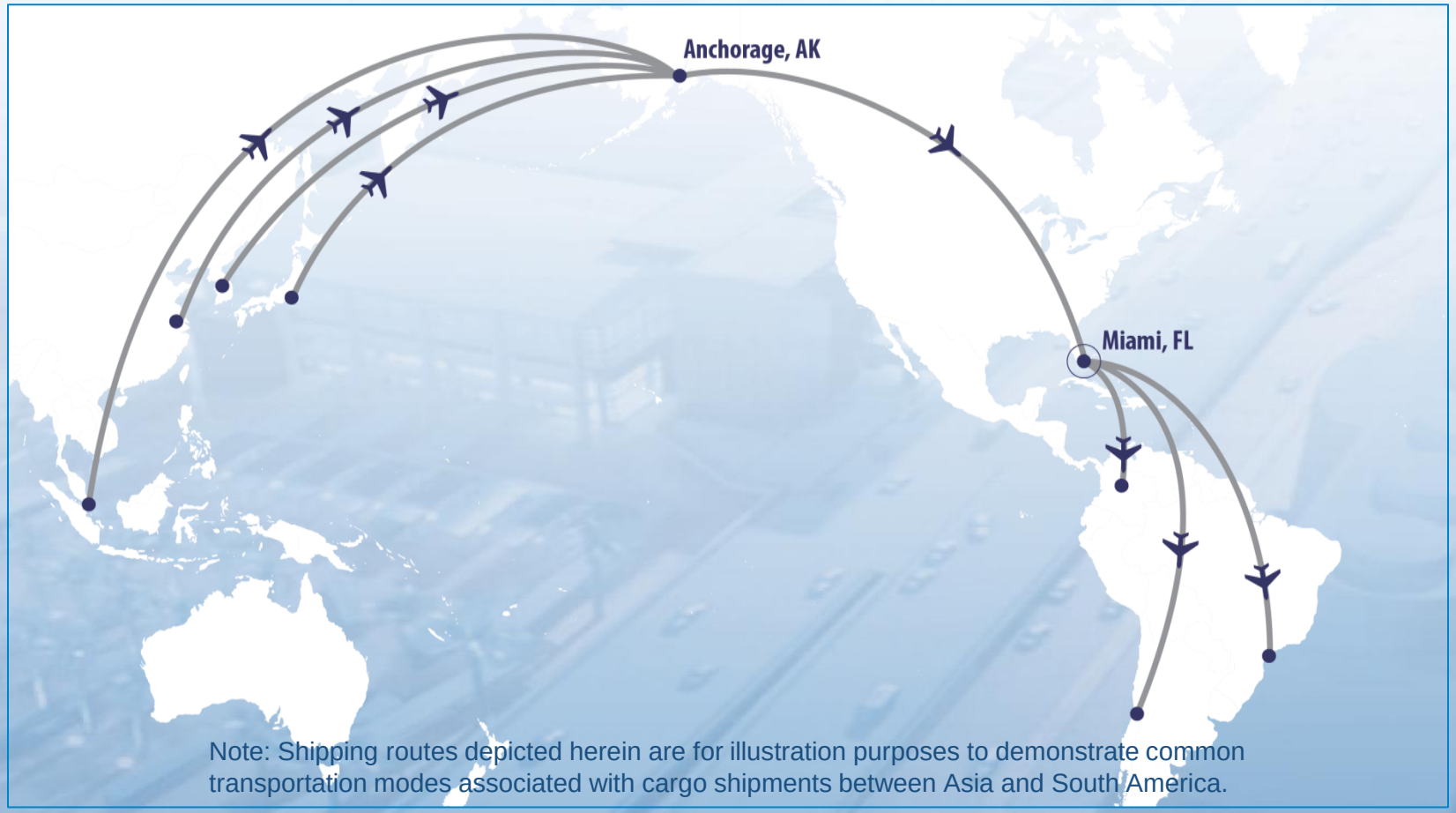
- New air capacity from Asia would displace emphasis on trucking from other gateways
- Potential transportation of cargo directly from Asia to MIA would likely induce additional cargo demand from Latin America to Asia

Primary Cargo Logistics Network
Asia – Latin America (Via MIA)



Note: Shipping routes depicted herein are for illustration purposes to demonstrate common transportation modes associated with cargo shipments between Asia and South America.

Expedited Cargo Logistics Network
Asia – Latin America (Via MIA)



Note: Shipping routes depicted herein are for illustration purposes to demonstrate common transportation modes associated with cargo shipments between Asia and South America.

Increased Connectivity Between Latin America & Asia

- Impact on existing cargo carriers at MIA would be nominal
- Near-term impact on surface congestion could be beneficial:
  - New air capacity from Asia displaces emphasis on trucking from West Coast gateways
- Demand for dedicated cargo facilities at MIA would increase
  - Currently, none of the three Asian carriers serving MIA have their own dedicated facilities
  - These carriers are accommodated in common use facilities served by other MIA tenants, as well as 3rd party handlers
  - Introduction of greater frequencies for existing tenants and new service by prospective additions may cause carriers to reevaluate such relationships
  - The Asian carriers could be relocated to other on-airport locations under their own control or cause their existing landlords and service partners to expand

Adjustment for Cargo Industry Recovery

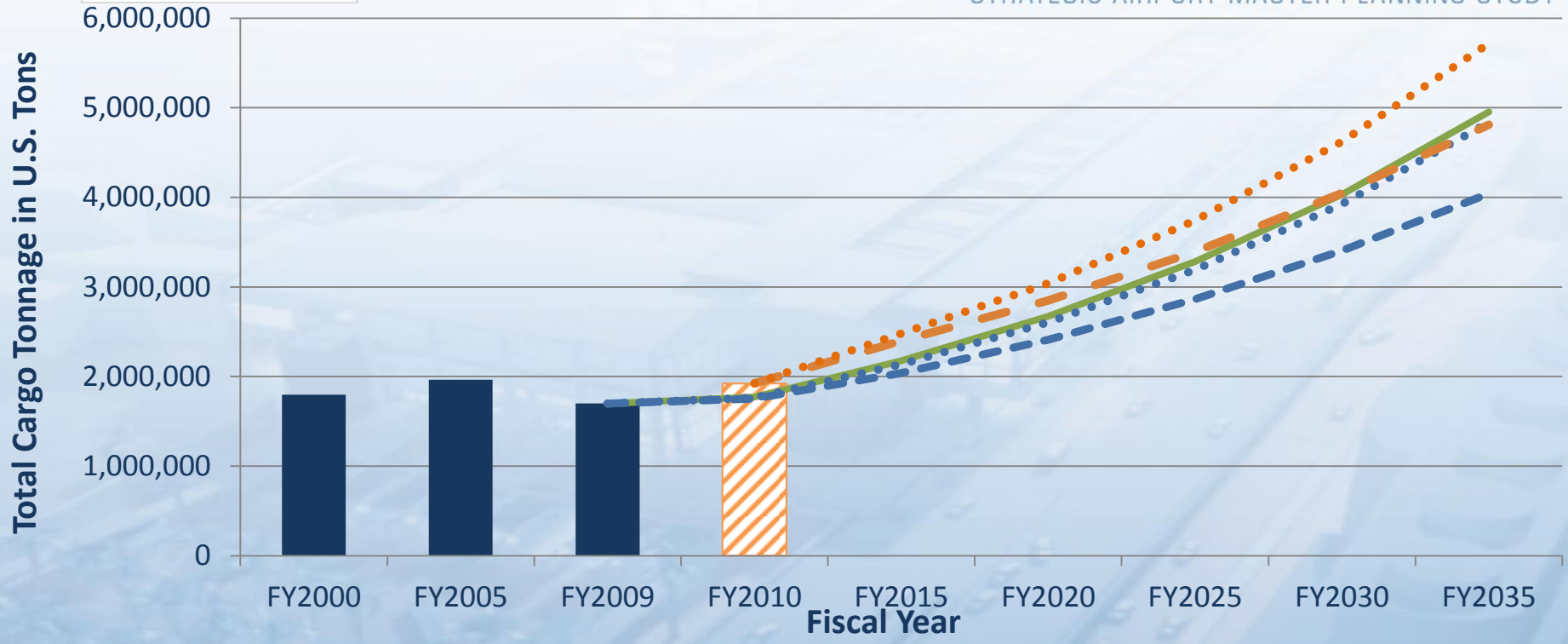
Updating of Base Year: Adjustment for Cargo Industry Recovery

- When forecasts were originally completed and approved, reasonable efforts were made to not exaggerate long-term influence of particularly challenging air cargo environment:
  - Relatively little emphasis on historical time-series or trend analysis
  - Emphasis on 25 year planning horizon focused on long-term growth more than short-term trends
  - Heavily stratified forecasts introducing multiple stimulus effects from fastest-growing markets,
  - Nonetheless, original base year 2010 was near low ebb of ten-year cycle

Updating of Base Year: Adjustment for Cargo Industry Recovery

- Impact of updating forecasts to register dramatic recovery in Fiscal Year 2010 and continued recovery underway in FY 2011, includes:
  - Base year of original forecast (FY 2009) = 1.7 million tons
  - Projected FY 2011 tonnage = approximately 2.1 million tons
  - The 2011 tonnage for MIA is nearly equal to what would have been forecast for FY 2015 in the original forecasts
- Due to recessionary impacts during base year (FY 2009), the Baseline Cargo Forecast appears to be conservative
  - The annual cargo tonnage for FY 2011 appears to be a more suitable basis for projecting future cargo demand at MIA

Updating of Base Year: Adjustment for Cargo Industry Recovery



Sources: Webber Air Cargo, March 2010; FAA Aerospace Forecast FY2009-2025.

Updating of Base Year: Adjustment for Cargo Industry Recovery

- Influences of increased cargo demand during base year:
  - Moderate increases in near-term volumes nominally increase growth rates for entire forecast period
  - Due to compound growth, dramatically increase long-term forecasted tonnage
  - A potential Base Case forecast just exceeding 5 million tons and a High Case that roughly triples FY 2010 volumes by FY 2035.
  - Updated forecasts are not excessive compared with institutional forecasts for global air cargo but reflect greater growth than anticipated for North America – consistent with MIA's predominantly international function.