

# AIRPORT INFRASTRUCTURE IPT

## NGATS ECONOMIC DRIVERS MOTIVATIONS AND BARRIERS, BENEFITS AND COSTS

NTSB, Washington, D.C.  
December 14-15, 2006

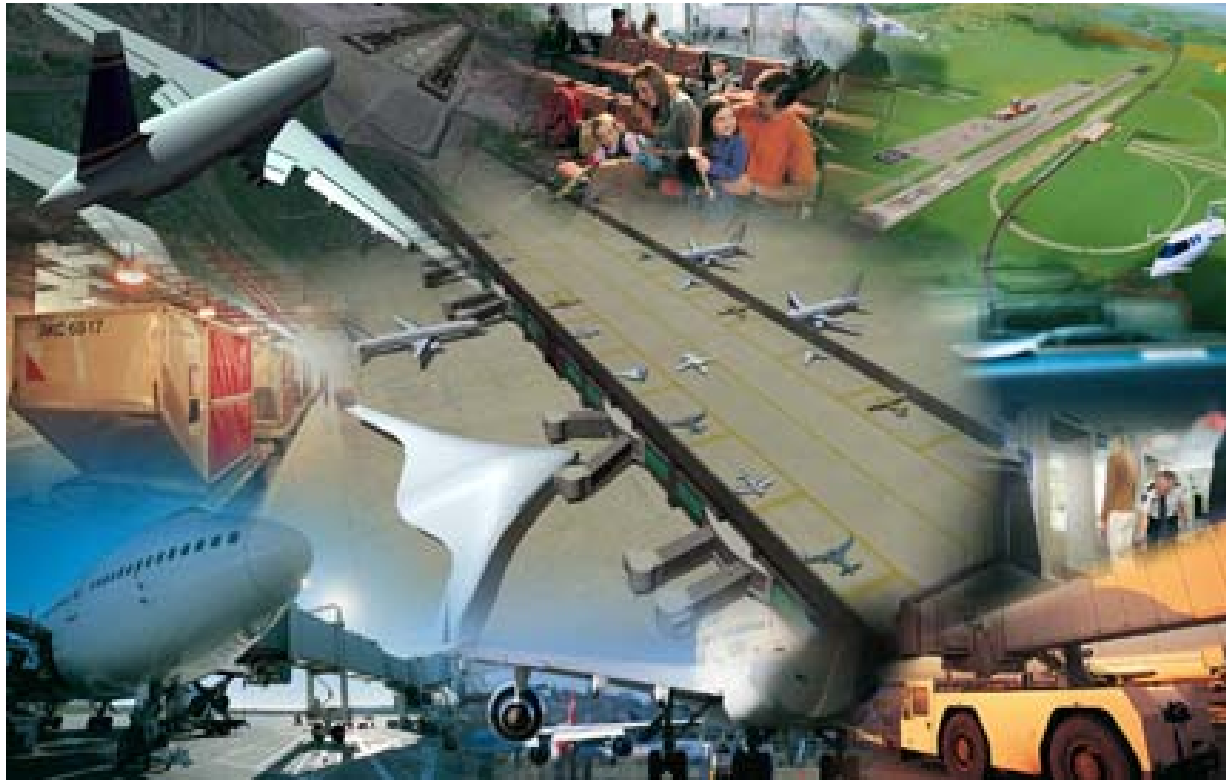


Charles R. Everett Jr., Manager  
National Planning and Environmental Division  
Federal Aviation Administration

Airport Infrastructure IPT Lead



# Airport Infrastructure IPT



## NextGen Vision

Develop Airport Infrastructure to Meet Future Demand



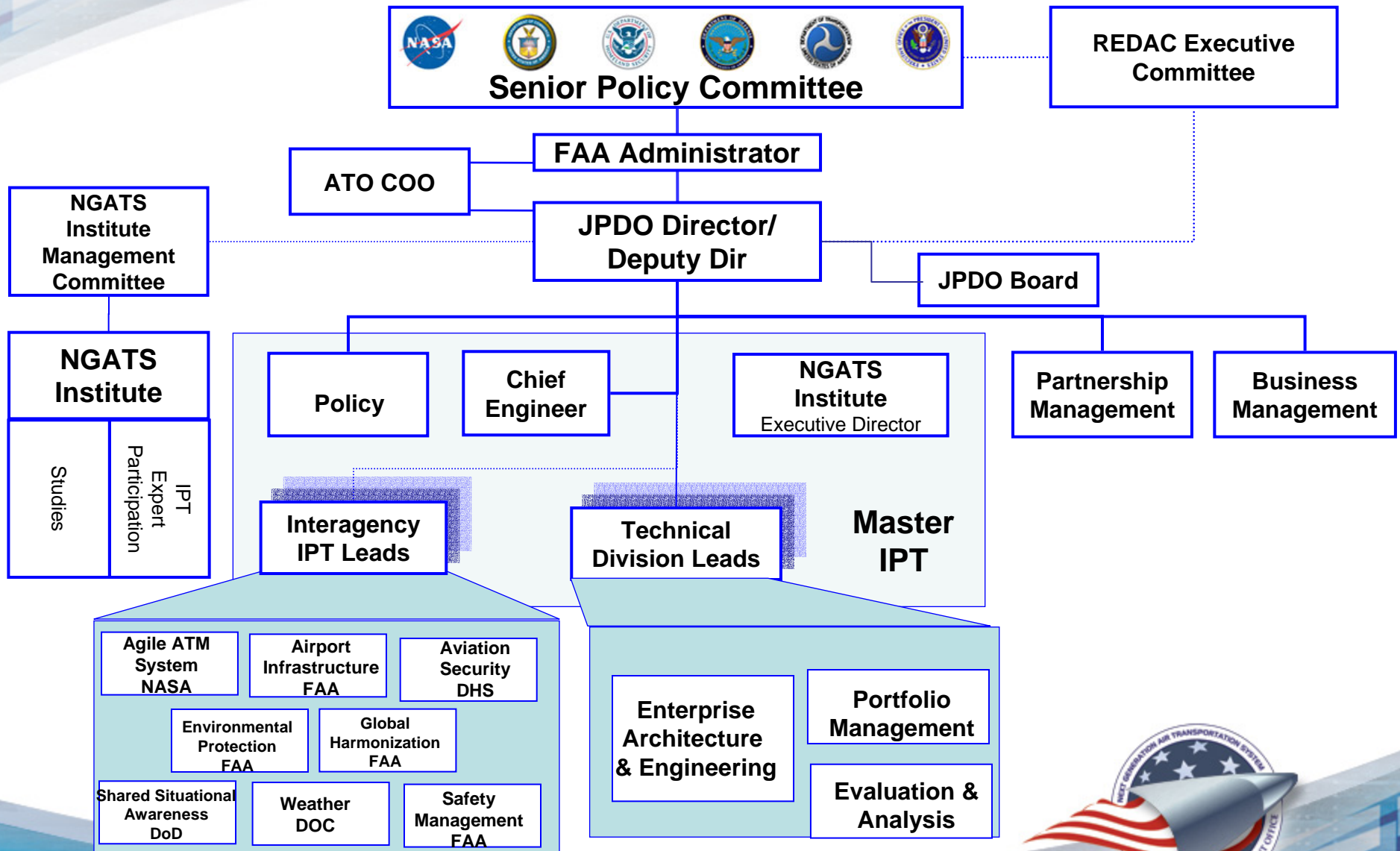
# Agenda

- **Mission**
- **Roles and Responsibilities**
- **Airports and Capacity**



# JPDO FY07 Organization

Next Generation Air Transportation System  
Joint Planning and Development Office



# Integrated Product Teams (IPT)

- Agile Air Traffic Management System
- Airport Infrastructure
- Aviation Security
- Environmental Protection
- Global Harmonization
- Safety Management
- Shared Situational Awareness
- Weather



# Airport Infrastructure IPT

## Develop airport infrastructure to meet future demand

**Identify, develop, and facilitate the airport systems required to meet future capacity demands and provide the needed flexibility and efficiencies required to adapt to changing air transportation needs.**

- Satisfy future growth in demand through the integration of new technologies or capabilities that enhance efficiency and through the preservation, expansion and modification of existing airports and, in some circumstances, the establishment of new airports to accommodate changing air transportation needs.
- Enable services tailored to user needs such as on demand aviation including increased commercial and cargo operations, regional jets, air taxi-services, very light jets and unmanned vehicles.
- Reduce transit time and increase predictability of operations enabling reductions in domestic curb-to-curb transit time by 30%.
- Ensure security efficiently serves demand, and instills user confidence by addressing security of airport perimeter, terminals and surface areas.
- Reduce costs for air transportation for passengers, users and operators.
- Balance aviation's environmental impact at airports with other societal objectives and community interests.



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# Airport Infrastructure IPT

INDUSTRY	GOVERNMENT
Air Line Pilots Association	Department of Commerce
Air Transport Association of America	Department of Defense
Airport Consultants Council	Department of Homeland Security
Airport Council International – North America	Department of Transportation
American Association of Airport Executives	Federal Aviation Administration
Boeing	National Aeronautics and Space Administration
Cargo Association of America	
Continental Airlines	
Embry Riddle Aeronautical University	
General Aviation Manufacturer's Association	<b>CONSULTANTS</b>
Georgia Institute of Technology	Booz Allen & Hamilton
Honeywell Aerospace	Crown Consulting
Jeppesen	Harris Miller Miller & Hanson
Lockheed Martin	HNTB Corporation
MITRE	MJF Strategies
National Association of State Aviation Officials	Ricondo & Associates
Raytheon	SH&E
Regional Airlines Association	TransSolutions
Sensis Corporation	URS Corporation
USAirways	

# Integrated Product Team

- **Composition:** Government-agency and non-federal government representatives
- **Leadership:** A representative from one federal agency leads each IPT
- **Appointment & selection:**
  - Federal government: Appointed by parent agency
  - Non-federal government: Selected by NGATS Institute process following notice and application
- **Purpose:** The IPTs establish detailed action plans that will break the overall NextGen project down into manageable tasks.



# Integrated Product Team

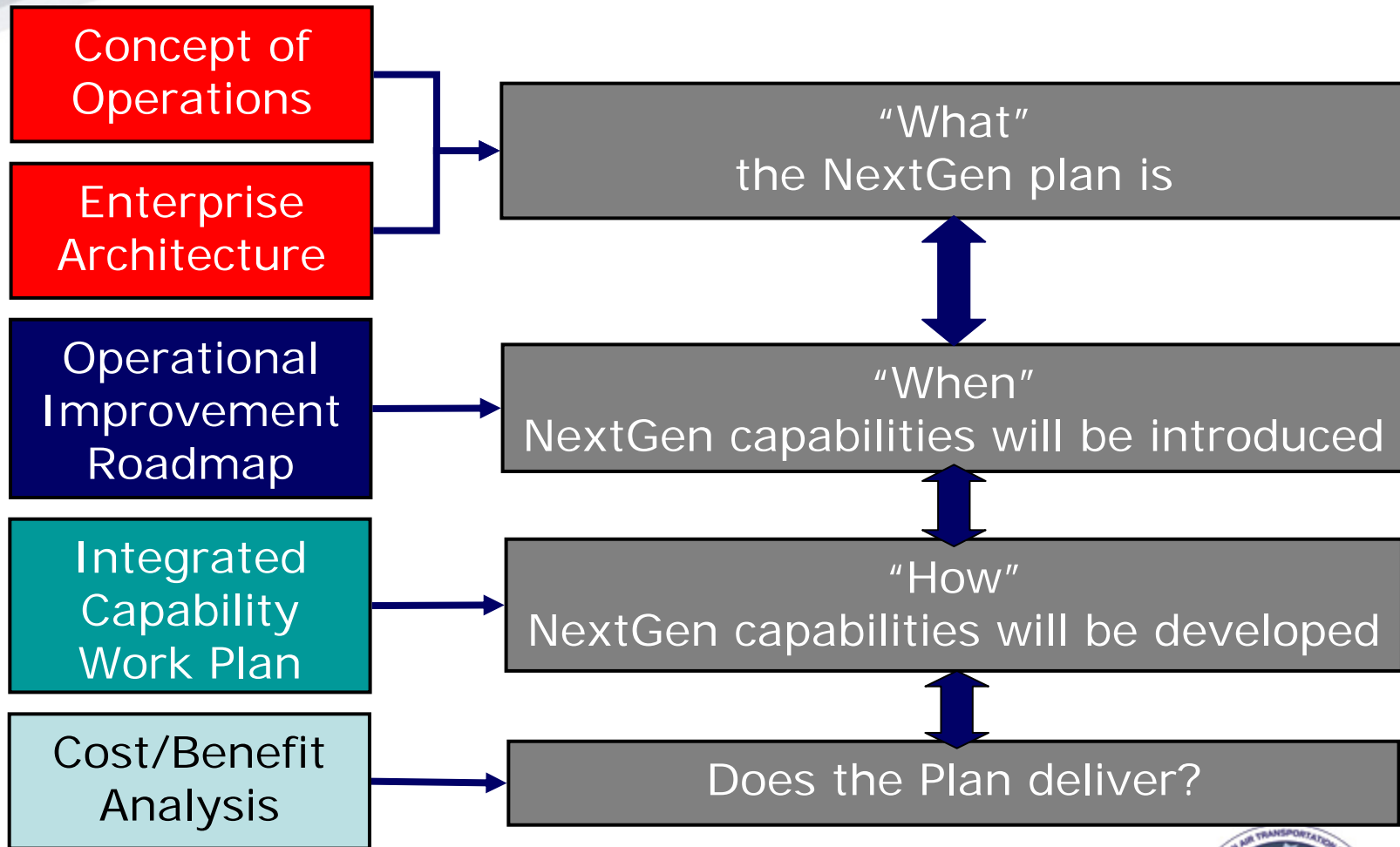
- **Concept generation**
- **Feasibility assessment**
- **Detailed implementation planning and assessment**

## Specific tasks include:

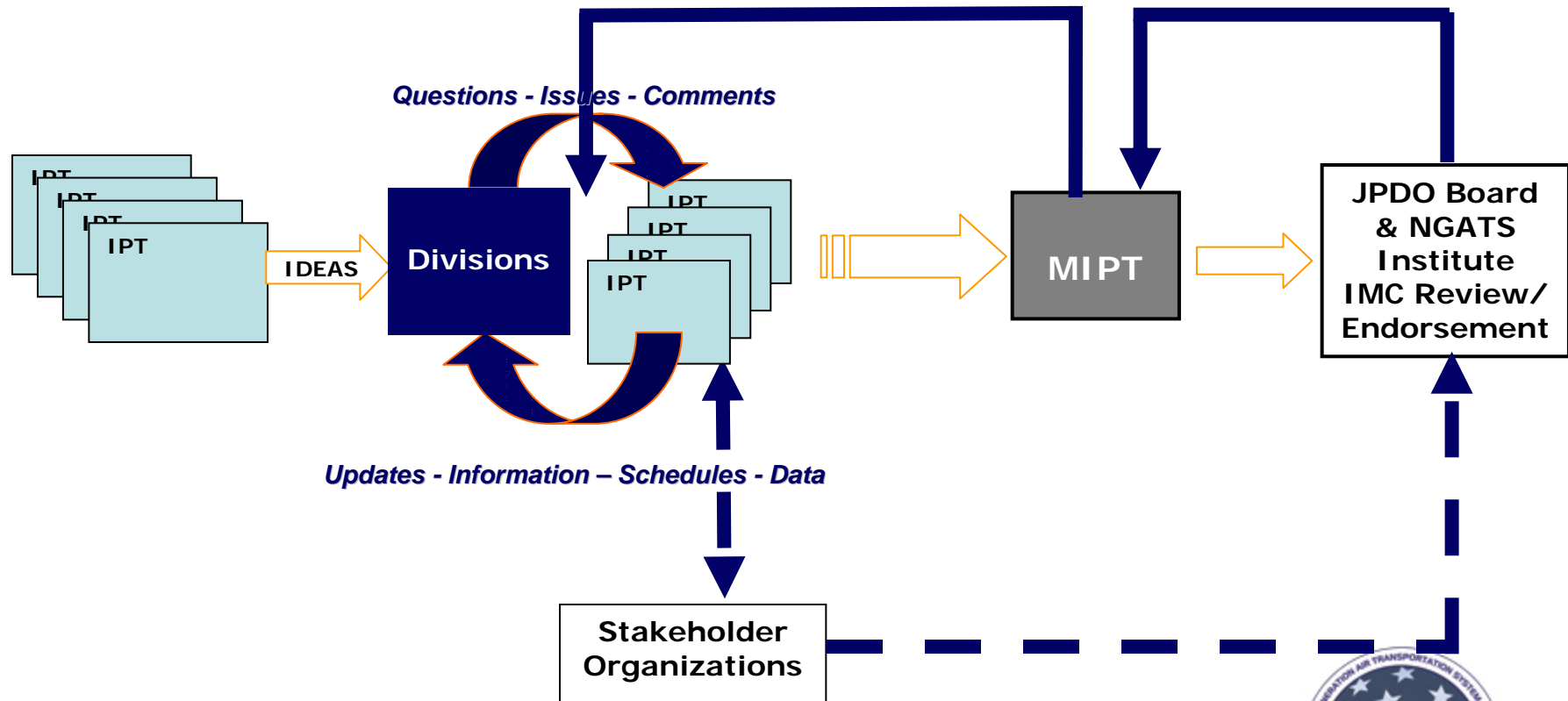
- Managing the planning and facilitating the execution of all relevant work to complete the assigned strategy
- Conducting analyses and studies to select and validate implementation alternatives (in conjunction with JPDO divisions)
- Analyzing changes currently underway, identifying gaps, and establishing the required government and/or industry research and development activities to close necessary gaps (in conjunction with JPDO divisions)
- Coordinating with government and private industry on research and development needs
- Collaborating with industry on research and implementation for the initiative
- Collaborating with government on research progress and status of acquisition programs
- Sponsoring or identifying needs for advanced concept and technology demonstrations
- Identifying needs for approaches such as policy, regulation, and operational procedures
- Establishing detailed requirements for individual mission areas that are consistent with overall NGATS goals
- Creating a transition plan for implementation of products/capabilities
- Creating public/private partnerships that include multi-agency government industry and participation



# Major JPDO Planning Documents



# Concept Diagram for Planning Document/Product Development & Endorsement



Note: "Final" planning documents/products to agencies for implementation. JPDO continues to monitor



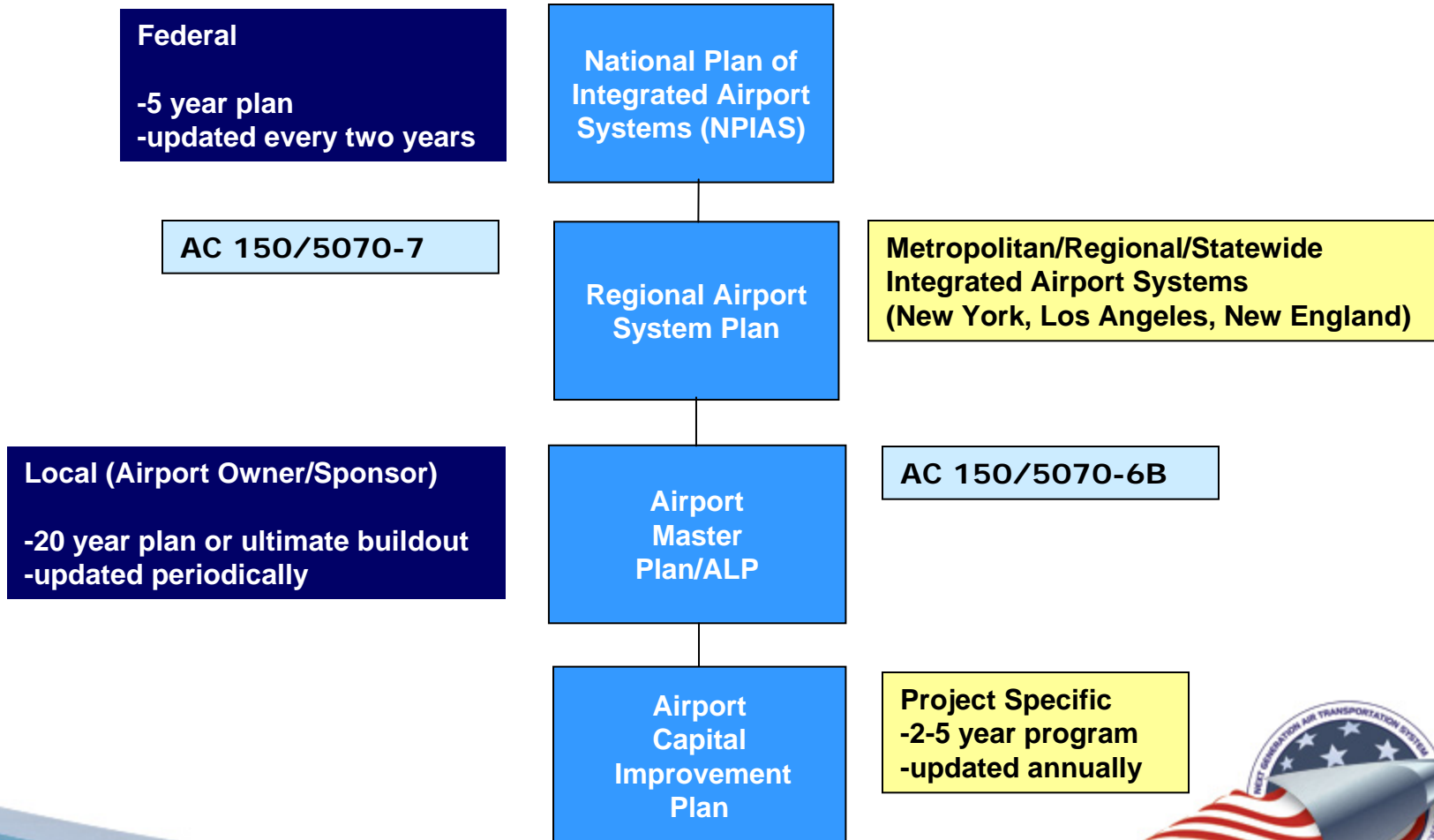
# Greater Capacity




Our goal is to work with local governments and airspace users to provide increased capacity in the United States airspace system that reduces congestion and meets projected demand in an environmentally sound manner.



# Airport Planning Process







Federal Aviation Administration

## Report to Congress

# National Plan of Integrated Airport Systems (NPIAS)

2007-2011

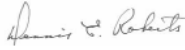
U.S. Department of Transportation  
Federal Aviation Administration

## Advisory Circular


Subject: AIRPORT MASTER PLANS    Date: July 29, 2005    AC No: 150/5070-6B  
Initiated by: APP-400    Change:

1. **PURPOSE.** This Advisory Circular (AC) provides guidance for the preparation of master plans for airports that range in size and function from small general aviation to large commercial service facilities. The intent of this AC is to foster a flexible approach to master planning that directs attention and resources to critical issues. The scope of each master plan must be tailored to the individual airport under evaluation.

2. **CANCELLATION.** This publication cancels Advisory Circular 150/5070-6A, *Airport Master Plans*, dated June 1985; Appendix D, *Airport Layout Plan*, of this document cancels Chapter 1, Section 5, *Airport Layout Plan*; Appendix 6, *Metric Conversion and Typical Airport Layout Plans*; and Appendix 7, *Airport Layout Plan Components and Preparation*, of Advisory Circular 150/5300-13, *Airport Design*, dated September 1989.





Dennis E. Roberts, Director  
Office of Airport Planning and Programming




U.S. Department of Transportation  
Federal Aviation Administration

## Advisory Circular

### The Airport System Planning Process





AC No: 150/5070-7  
Date: November 10, 2004




Federal Aviation Administration

## OPERATIONAL EVOLUTION PLAN



FEDERAL AVIATION ADMINISTRATION  
NATIONAL AIRSPACE SYSTEM  
OPERATIONAL EVOLUTION PLAN  
2006-2015

EXECUTIVE SUMMARY    May 2006    Version 8.0




ORDER  
5050.4B

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

NATIONAL ENVIRONMENTAL POLICY ACT  
(NEPA) IMPLEMENTING INSTRUCTIONS  
FOR AIRPORT ACTIONS

Effective Date: April 28, 2006    Initiated by: APP-1



U.S. Department of Transportation  
Federal Aviation Administration

## Airport Capacity and Delay

REPORT INCORPORATES  
ORDS 5 AND 2

AC 150/5060-6  
Issue: 9-22-03

Advisory Circular



# Increasing Capacity: New Runways (Open)

Airport	ID	Completed	Length (Feet)	Total Cost (\$M)	AIP (\$M)	Ops	%	Delay Reduction
Philadelphia	8/26	12/1999	5,000	220	88	48,000	12	N/A
Phoenix	7R/25L	10/2000	7,800	185	79	17,000	3	N/A
Detroit	4L/22R	12/2001	10,000	197	122	79,000	15	6.4
Cleveland	6L/24R, pl 6L/24R, pl I	12/2002 8/2004	7,145 1,775	228 230	85 63	104,000	30	1.7
Denver	16R/34L	9/2003	16,000	180	132	213,000	30	6.5
Miami	8/26	9/2003	8,600	215	101	160,000	27	7.8
Houston	8L/26R	10/2003	9,000	298	193	145,000	27	3.4
Orlando	17L/35R	12/2003	9,000	203	78	225,000	37	7.7
Minneapolis/ St. Paul	17/35	10/2005	8,000	563	174	106,000	19	5.7
Cincinnati/ N. Kentucky	18R/36L	12/2005	8,000	233	132	64,000	12	4.0
St.Louis/ Lambert	11/29	4/2006	9,000	1,100	191	204,000	48	3.4
Atlanta	10/28	7/2006	9,000	1,350	240	281,000	33	4.8
Boston	14/32	11/2006	5,000	81	61	N/A	25	2.8

# Increasing Capacity: New Runways (Construction)

Airport	Anticipated Completion	Status	Total Cost (\$M)	AIP (\$M)	Ops	%	Delay Reduction
Philadelphia	12/2007 (extension)	Construction	65	37	N/A	--	1.4
Los Angeles International	6/2008 (Reloc/Safety)	Construction	282	92	N/A	--	0
Seattle-Tacoma	11/2008	Construction	1,054	301	175,000	48	3.4
Washington-Dulles	11/2008	Construction	356	200	70,000	16	2.5
Chicago-O'Hare	11/2008, pla	Construction (9L/27R)	548	110	52,300	5	0.7
Charlotte-Douglas	2/2010	Construction (17/35)					



# Increasing Capacity: New Runways (P&E)

Airport/ Metro Area	Proposed Project	ROD Issue (est.)	Current Status
Ft. Lauderdale	Runway Extension	2008	Environmental began 2/2005
Philadelphia	Reconfiguration	2008	Master Plan and Environmental underway
Portland-International	Extension	2009	Feasibility study underway
Las Vegas Metro Area	New Airport	2010	Environmental to begin Spring 2006 (Ivanpah Valley)
San Diego Metro Area	New Airport	TBD	Planning underway
Chicago Metro Area	New Airport	TBD	Master Plan and Environmental underway (Peotone)
Houston Intercontinental	New Runway	TBD	Planning is underway to evaluate another runway



# Airports

## 35 OEP\* Airports Accounted for 80% of Total U.S. Enplanements in CY2005

Atlanta	Las Vegas	Detroit	Seattle	Cincinnati	Chicago Midway	Pittsburgh
Chicago O'Hare	Phoenix	Newark Liberty	Philadelphia	Baltimore Washington	Salt Lake City	St. Louis
Los Angeles	New York-JFK	San Francisco	Boston Logan	Washington-Dulles	Tampa	Portland
Dallas/Ft. Worth	Minneapolis/St. Paul	Orlando	Charlotte	Fort Lauderdale	San Diego	Memphis
Denver	Houston	Miami	New York-LGA	Honolulu	Washington National	Cleveland

OEP - Operational Evolution Partnership

Expanded OEP will serve as the means to transform the NAS into NextGen.



# Airports

## Summary of Metro Areas, OEP and Secondary Airports - FY06

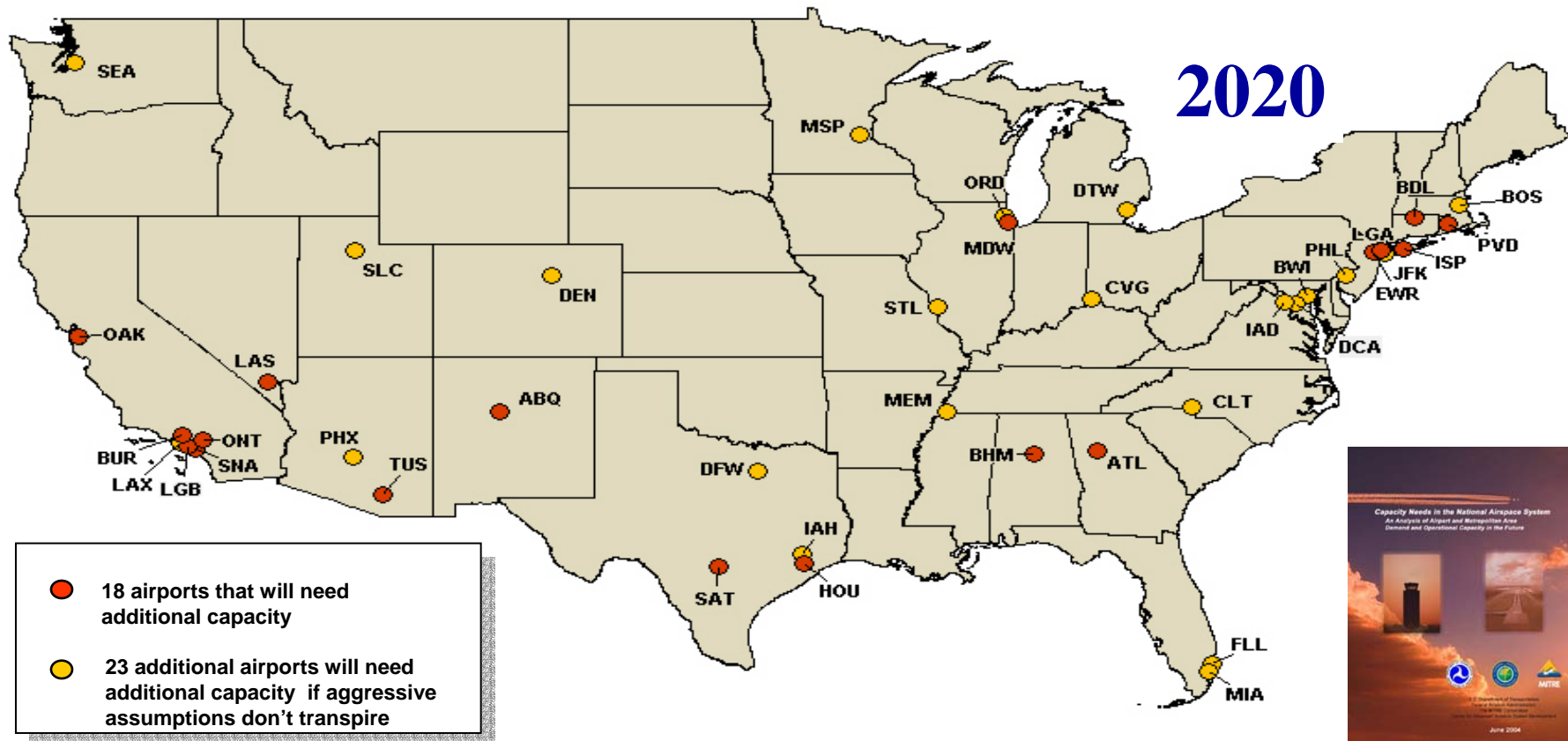
No.	Metro Areas	OEP Airports	Secondary Airports	Total Airports
1	Atlanta	1	17	18
2	Chicago	2	15	17
3	Los Angeles Basin	1	7	8
4	New York	3	10	13
5	Philadelphia	1	8	9
6	San Francisco Bay Area	1	7	8
7	South Central Florida	4	24	28
8	Washington/Baltimore	3	12	15
	<b>Total:</b>	<b>16</b>	<b>100</b>	<b>116</b>



# Capacity Needs in the NAS

## Identifying Airports Needing Additional Capacity

Determine which airports will need additional capacity & why, given the anticipated future demand for air travel



# Next Generation Air Transportation System



[www.jpdo.aero](http://www.jpdo.aero)