



Next Generation Air Transportation System “NextGen”

A Transformation of the
Nation’s Air Transportation System

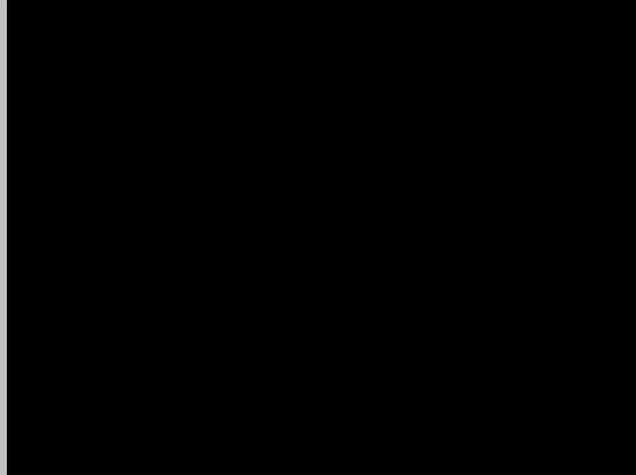


National Projections

- 3X increase in demand by 2025
- 1 billion passengers by 2015
- Current system cannot support demand
- Transformation needed



JPDO Video on NextGen





California Projections

- 2015 capacity crisis in LA & SFO Regions
- Limited ability to expand CA's major airports (LAX, SFO, SAN)
- Much greater utilization of GA Airports to meet our demand



Vision 100 in 2003

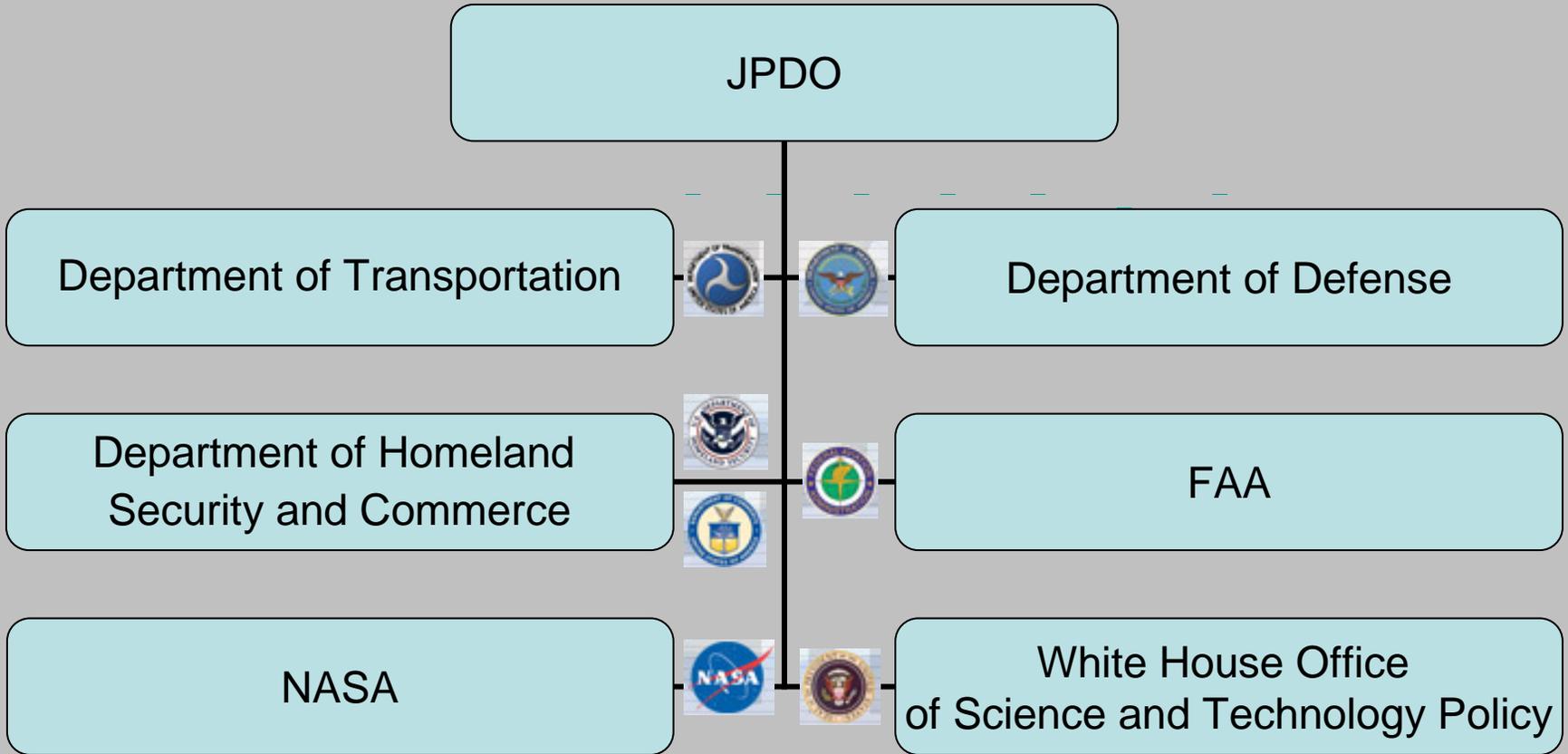
President & Congress



Joint Planning
& Development Office
JPDO



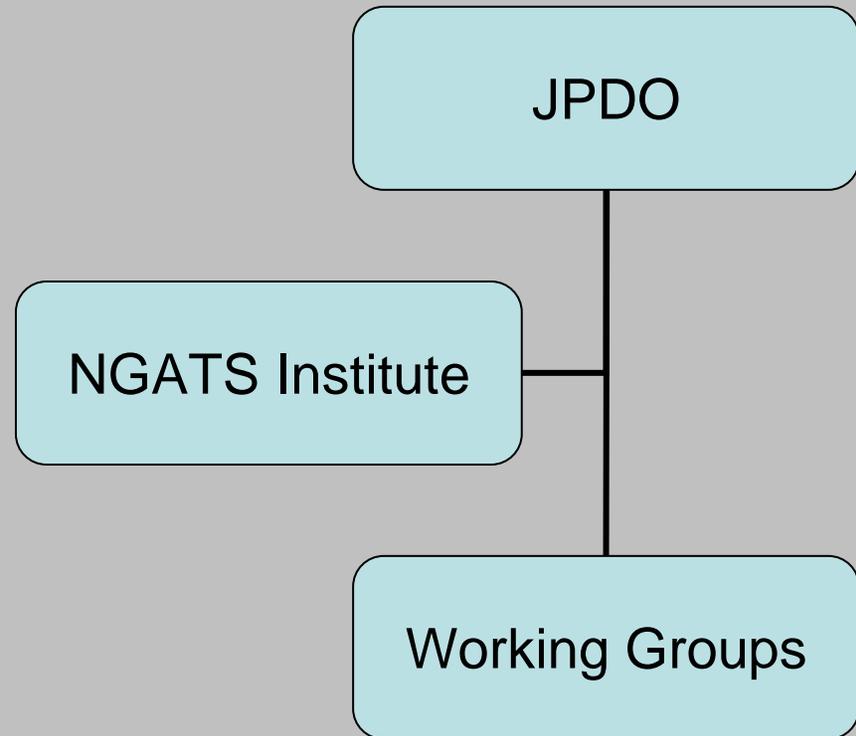
JPDO is Planning NextGen





What is the Role of JPDO?

- Prepare Plan for NextGen through products:
 - Concept of Operations
 - Enterprise Architecture
 - Integrated Work Plan
- Task NGATS Institute
- Provide Policy Level Guidance to Working Groups
- Overseen by Senior Policy Committee





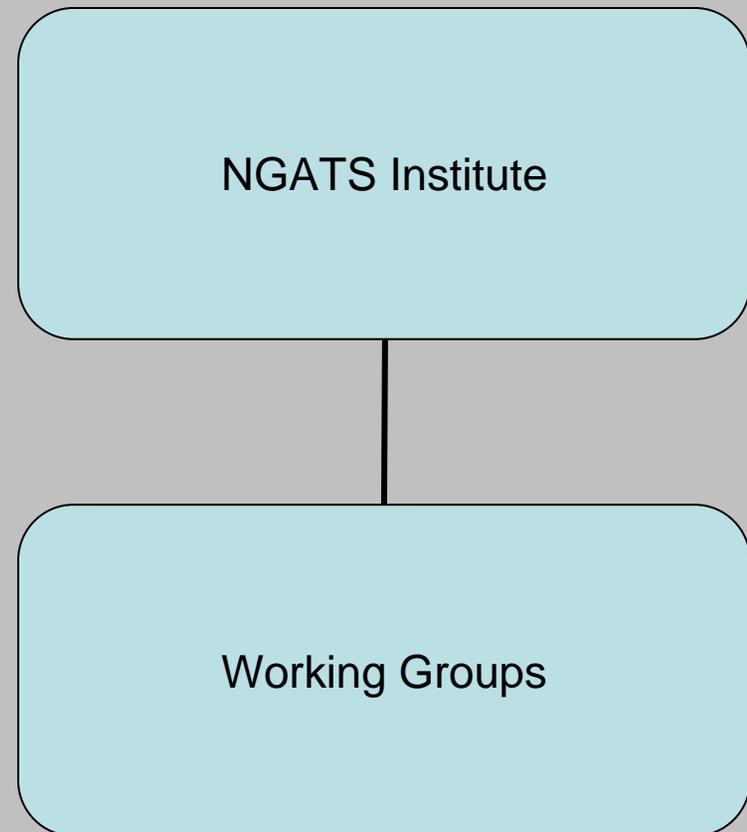
What is the NGATS Institute?

- Established spring of 2005
- Contract between National Center for Advanced Technologies (NCAT) and FAA
- JPDO mechanism to access private sector expertise, tools, and facilities for NextGen
- Hosted by Aerospace Industries Association
- Co-chaired by presidents of:
 - Air Line Pilots Association
 - Air Transport Association
- Cooperative enterprise between Government, Academia and the private sector (P/P/P)



What is Role of NGATS Institute?

- Overseen by Institute Management Council (IMC)
- Creates and Staffs Working Groups
- Prepares Needs Statements for JPDO
- Allows stakeholders involvement
- Allows participation by all segments of the industry
- Enabling partnership between government and private sector



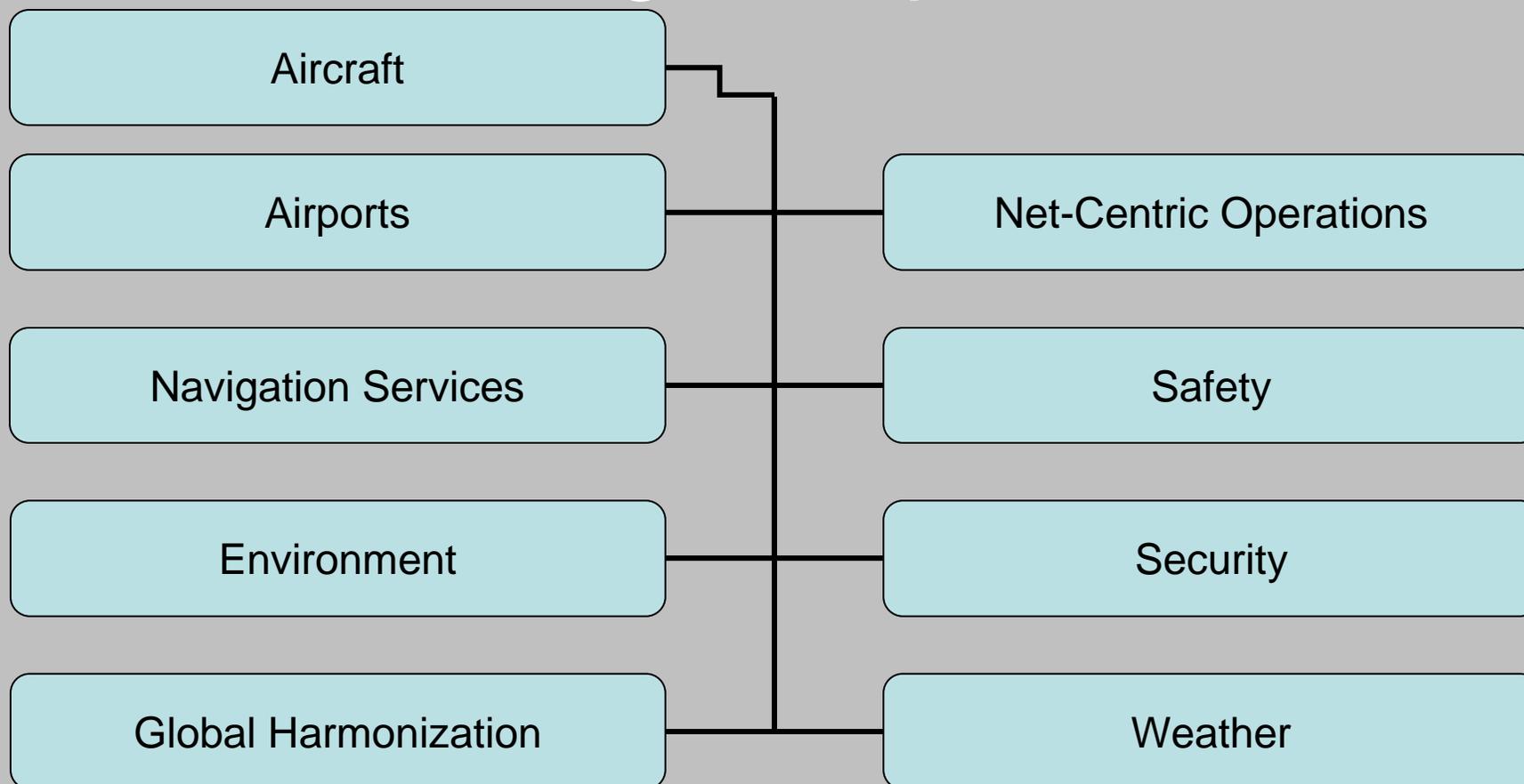


What Are Working Groups?

- Nine government/industry teams
- Created by NGATS Institute
- Break project into manageable strategies
- Each JPDO agency leads at least one Working Group best utilizing its area of knowledge



What Working Groups Exist?





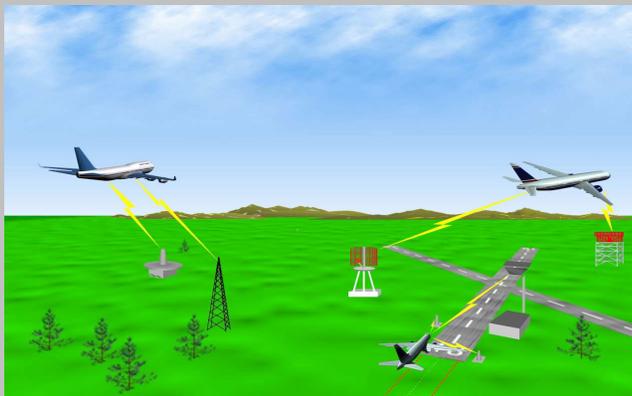
What NextGen Covers

- Airports
 - Aircraft
 - Airspace

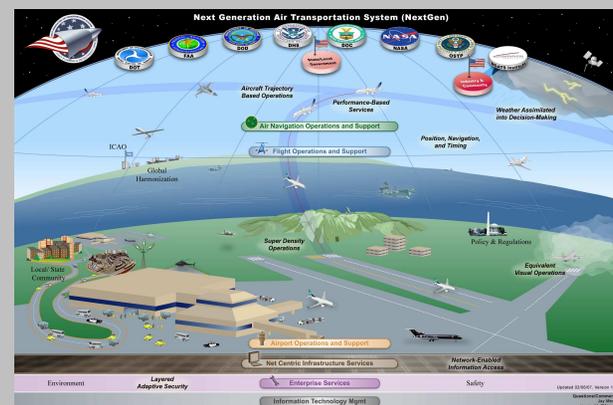
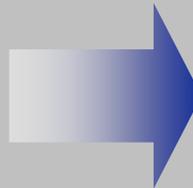


NextGen... “What is it?”

- Ground-based Technology
- Dependent on human interface and decisions
- Limited use of automation
- Aging Infrastructure
- Capacity restricted and fragile
- Net Centric Environment
- Trajectory Based Operations
- Performance Based Services
- Environmentally friendly
- Agile with no capacity restrictions
- Curb to curb, multi-modal



Today's NAS



Year 2025



How NextGen Compares

- Air Traffic Control will be more:
 - Flexible
 - Resilient
 - Scalable
 - Adaptive
 - Highly automated
- Airports/Aircraft will be more:
 - Sustainable
 - Noise efficient
 - Fuel efficient
 - Carbon efficient



NextGen Key Capabilities

1. Network Enabled Information Access
2. Performance-Based Services
3. Weather-Assimilated Decision-Making
4. Layered, Adaptive Security
5. Broad-Area Precision Navigation
6. Aircraft Trajectory-Based Operations
7. Equivalent-Visual Operations
8. Super Density Operations

Next Generation Air Transportation System (NextGen)



Environment

Layered Adaptive Security

Enterprise Services

Safety

Updated 02/06/07, Version 1

Questions/Comments



NextGen & the Environment

NextGen contributes to:

- *The Greening of Aviation*
- *Achieving a Sustainable Air Transportation System.*



The Greening of Aviation

- NextGen includes aviation expansion and technological advances that are “green” in nature.
- Strategy to reduce the environmental footprint is through:
 - Noise
 - Air Quality
 - Water Quality
 - Global Climate
 - Energy



How can California lead?

- Through Early implementation of NextGen
 - Operational prototypes at Airports
 - Provide input on state guidance for implementation
 - Participate in state, local and private sector collaboration with federal organizations to stimulate tangible near-term result



Why should CA lead?

- Opportunity for state and national attention of California and its air transportation system
- Achieve economic gains and environmental improvements from transportation service quicker
- Stimulate new business models for airports
- Realize early economic and environmental benefits for everyone in the air and on the ground
- Lead the nation with Florida as early adopters of NextGen



NextGen Now

NextGen will:

- **Expand our Air Transportation Capacity**
- **Grow the Economy and Expand GDP**
- **Protect the Environment...**

...all at the same time.



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