

# *Future of Airspace*

2008

**Integrated Communication Navigation and Surveillance  
(ICNS) Conference**

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# Outline

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- **What does *Future Airspace* mean to DOD**
- **Benefits and Opportunities for the Warfighter**
- **Key Documents**



## *What Does Future Airspace (NextGen) Mean to the DoD? \**

- DoD - unique role as **user**, service **provider**, and **regulatory** partner
- DoD's NextGen equities
  - Must ensure and enhance ability to **operate seamlessly** with civil aviation in both **national** and **international** airspace
  - Must address unique DoD requirements
    - Homeland Defense
    - Special Use Airspace for training and ranges
    - Unmanned Aircraft System (UAS) employment
    - Surveillance
- “DoD must participate in NextGen partnership in a cohesive and consistent manner”

**DoD must capitalize upon this opportunity to ensure the NextGen vision meets its unique mission needs**



# ***Benefits and Opportunities***

## **What's in it for the Warfighter**

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- Provides ***opportunity*** to affect NAS Policy
  - Proactive engagement to protect DoD equities
  - Capitalize upon DoD resident expertise to influence overall policy and architecture compatibility (e.g. Net-Centric, Precision Navigation, and Integrated Weather)
  - Influence UAS' seamless integration into & access in NAS
- Provides ***leverage*** to ensure and enhance operations
  - Leverage NextGen technologies to improve combat capabilities (e.g. Combat ID, Airspace C2, Precision Landing, etc)
  - Promote, advocate, endorse and educate DoD predominant technologies as NextGen solutions (e.g. Weather, GIG)
  - Ensure national and global compatibility and access to mission critical airspace, routes, altitudes, etc.



# ***Benefits and Opportunities***

## **What's in it for the Warfighter (cont)**

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- Ensures ***vital focus*** on Air Domain Security
  - Integrate Air Domain Surveillance and Intelligence
  - Improve Air Defense / Non-cooperative surveillance
  - Provide Critical Infrastructure Protection
  - Optimize Net Centric Ops
- ***Concentrates*** Acquisition and Resource opportunities
  - Capitalize upon mutually beneficial technologies across several National Agencies – cost sharing, avoidance, and effectiveness
  - Drive coordinated requirements definition and cost effective funding decisions

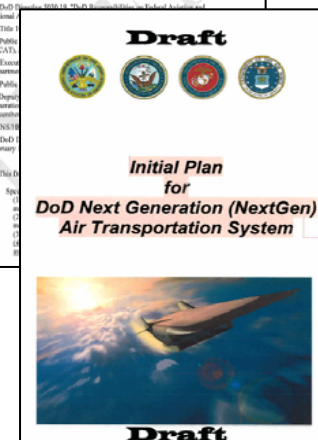
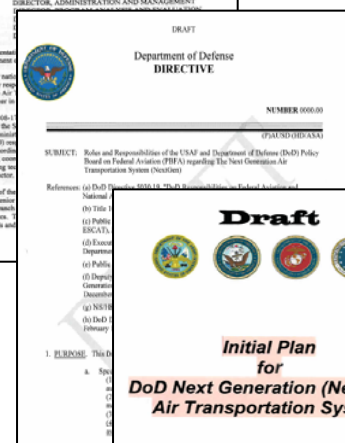
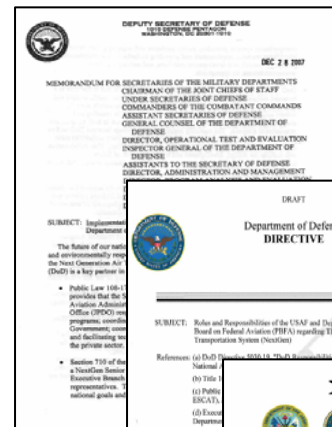
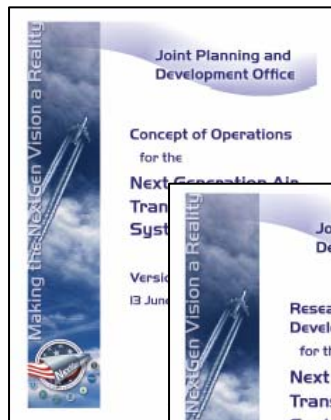
**Sustained, aggressive DoD leadership will secure the military utility of NextGen to the warfighter while decreasing its cost**



# NextGen Key Documents

## Joint Planning & Development Office

## Department of Defense





## Conclusions

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- NextGen is a **reality**, established by law / national policy
- DoD must capitalize to ensure the NextGen vision meets national and international **mission requirements**
- DoD must ensure National economic challenges do not override National **security needs**
- DoD can leverage Net-Centric, Precision Navigation, and Weather **expertise** while decreasing **cost** through technology integration and transfer



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**BACK UP**



# What is NextGen?

- **Legislatively mandated\*** modernization and recapitalization of the National Airspace System
  - Ensure the 2025 Air Transportation System meets the national air transportation safety, security, mobility, efficiency, and capacity needs
  - Built on premise that DoD and other partners must communicate and collaborate



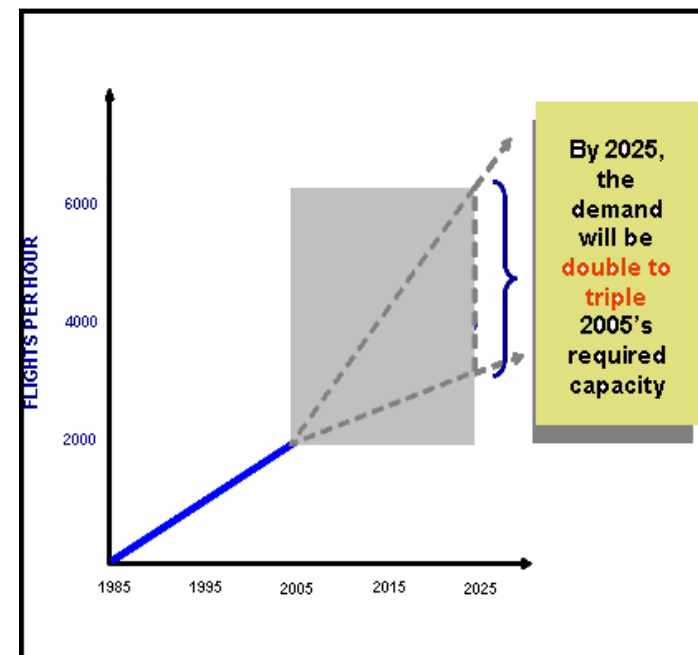
**NextGen is a reality, established by law / national policy**

\* 2003 FAA Reauthorization "Vision 100" Public Law 108-176 Century of Aviation Act



# Why NextGen?

- **National Aspect:** Current air transportation system is reaching its limits; projected growth will result in system gridlock \*
  - 2012 - 2015: System capacity maximized
  - 2025: Double to triple the demand of 2005
  - Without modernization, the economic loss due to gridlock to USA = \$40B by 2033\*\*
- **DoD Aspect:** constrained airspace access will impact DoD's ability to defend, deploy and train



**DoD must ensure National economic challenges do not override National security needs**

\* "Next Generation Air Transportation System in Brief" 2006

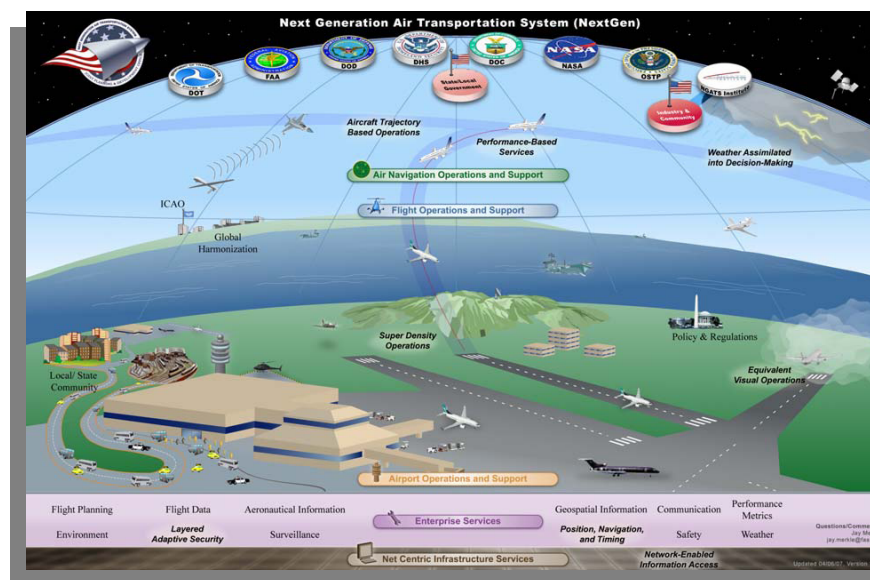
\*\* Secretary of Transportation Peters, Speech to National Business Aviation Association, 25 Sep 07



# NextGen Vision and Capabilities

NextGen envisions an integrated, **net-centric**, globally harmonized system based on **satellite navigation and control**, digital non-voice communication, and a shifting of decision-making from ground to cockpit

- Provides Eight Key Capabilities
  - **Network-Enabled Information Access**
  - Performance-Based Ops and Services
  - **Weather-Assimilated Decision-Making**
  - Layered Adaptive Security
  - **Broad-Area Precision Navigation**
  - Aircraft Trajectory-Based Ops
  - Equivalent Visual Ops
  - Super Density Ops



**DoD leverage will come from Net-Centric, Precision Navigation, and Weather expertise**