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VP-GM & Deputy to the President
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March 8, 2005
New Orleans, LA

***NACA: Back to the Future
for NASA Aeronautics***

The World of NASA Aeronautics

Today

- Mission
- Legacy Infrastructure
- Consequences

Observation

- Government – Walker Commission
- Industry / Government – NIA, Supersonic, Access 5

Opportunity

Transformation

NASA Aeronautics transform itself into viable, effective organization with funded R&D resources

Aeronautics- Mission & Infrastructure

Mission

- Is NASA working with DoD / military ?
- NASA linkage to industry
 - Does industry need NASA in making business case?
- Is scope under-funded?

Legacy Infrastructure

- Good balancing and rationalizing across NASA
- Test facilities- easy to shutdown- difficult to restart
- Some facilities given to universities
- NASA facilities at critical minimum mass
- Industry depends on NASA for facilities
 - Ames 11 'WT and Langley National Transonic WT
 - Ames 80X120 / 40X80 shutdown- Army rotorcraft need?
- Aeronautics has 6% NASA budget & 24% facilities costs
- Need a DoD and NASA testing facility infrastructure

Consequencies of Aeronautics Mission and Infrastructure

- NASA working technology – shows up in 2 decades
- Reducing or stopping work in an area not noticed immediately.
- Technology transfer will diminish – people interactions CRAD / R&D and system level prototype testing
 - great collaboration and learning
 - limited opportunities today
 - reports don't work alone
 - NASA needs to work closely with industry not far away
- National Aerospace System at capacity with no plan to change

Key Walker Commission Recommendations

- Increase investment in basic aerospace research that:
 - enhances U.S. national security,
 - enables breakthrough capabilities,
 - fosters efficient, safe aerospace transportation system.
- Adopt an aerospace policy that:
 - invigorates and sustains the aerospace industrial base.
 - creates a government-wide management structure.
 - moves products across international borders on a fully-competitive basis
- Transform U.S. air transportation system as national priority.
- Promote US growth - technology trained aerospace workforce.

**21st Century Air Transportation System Transformation:
*NASA / Gov't establishes the environment and infrastructure.***

Walker Commission - Aerospace Specific Goals

Air Transportation

- Demonstrate an automated and integrated air transportation capability that would triple capacity by 2025
- Reduce aviation noise and emissions by 90 %
- Reduce aviation fatal accident rate by 90 %
- Reduce transit time between any two points on earth by 50 %

Space

- Reduce cost and time to access space by 50 %
- Reduce transit time between two points in space by 50 percent
- Demonstrate the capability to continuously monitor and surveil the earth, atmosphere, space for military, intelligence, civil, commercial applications.

Time to Market and Product Cycle Time

- Reduce the transition time from technology demonstration to operational capability from years - decades to weeks -months.

Supersonic Cruise Industry Alliance Charter



•Purpose

- Motivate and accelerate the development of supersonic flight systems in the US

•Approach and Scope

- Advocate the advancement of common goals related to supersonic cruise flight
- SCIA partner with NASA, FAA, DoD, and other government agencies to develop plan
 - Identify key technologies
 - Leverage recent NASA, AFRL, and DARPA activities
 - Define flight data requirements and x-plane concepts
 - Develop integrated flight demo approached to validate key technologies and enable regulatory change
 - Develop regulatory proposals to enable certification and operation of supersonic cruise vehicles



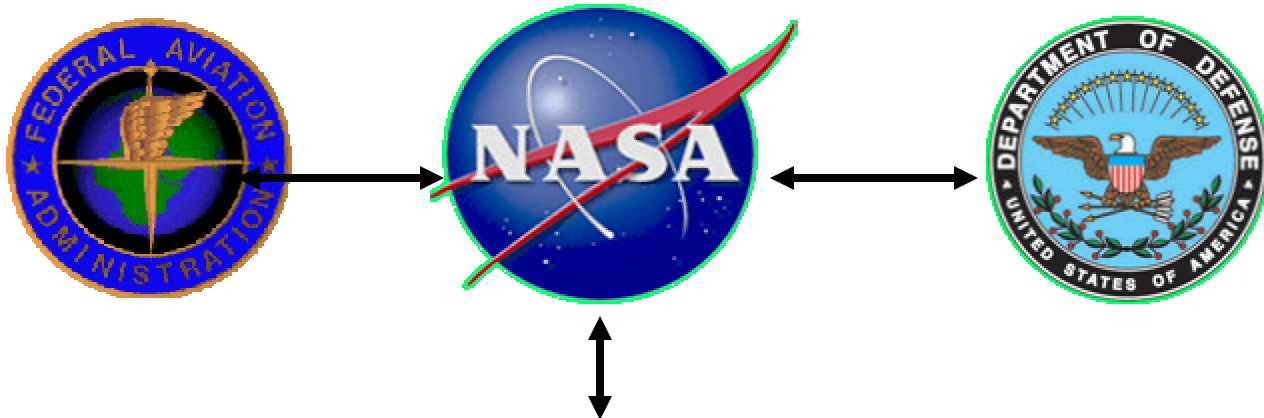
National Institute of Aerospace (NIA)

- **Study authorized by Congressional earmark**
- **National Strategy Team (NST) serves as NIA study's 'board of directors' (Bob Krieger, Chair)**
 - **Set overall augmentation target at \$1B / yr for each of 5 years**
 - **Allocated targets among 7 sectors**
- **Proposals to write research plans submitted 10 December 2004**
- **NIA research planning contracts awarded 20 December 2004**
 - **Firm Fixed Price (FFP) Level of Effort (LOE) type**
 - **Sector plan deliverables due 11 February 2005**
- **Final report to Congress 31 March 2005**

Access 5 Partnership

Vision

To operate High Altitude, Long Endurance (HALE) Remotely Operated Aircraft (ROA) routinely, safely, and reliably in the National Airspace System (NAS)



AeroVironment
Auroa Flight Sciences
Boeing

General Atomics
Northrop Grumman
Lockheed Martin

-WWW.access5.orgm and www.unitealliance.com

