



National Aeronautics R&D and Infrastructure Plans Outreach Meeting



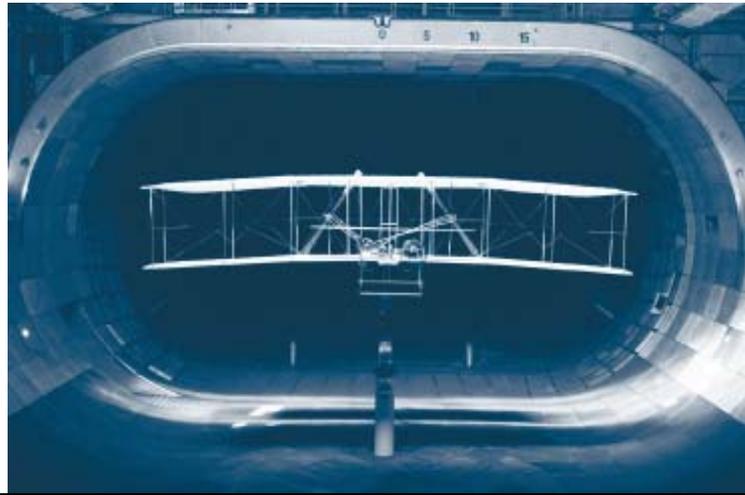
24 April 2007

Aeronautics S&T Subcommittee (ASTS)

Committee on Technology

National Science and Technology Council (NSTC)

- **2:00 – 2:05: Welcome, Introductory Remarks**
- **2:05 – 2:25: Review of National Aeronautics R&D Policy and Executive Order**
- **2:25 – 2:50: Strategy for the Development of the R&D and Infrastructure Plans**
- **2:50 – 3:00: Private Sector interaction with the NSTC**
- **3:00 – 3:15: Co-leads of ASTS Coordinating Groups**
- **3:15 – 3:30: Call for White Papers**
- **3:30 – 5:00: Open Discussion**



National Aeronautics R&D Policy



December 2006

Robie I. Samanta Roy
Assistant Director for Space and Aeronautics
Office of Science and Technology Policy

National Aeronautics R&D and Infrastructure Plans Outreach Meeting
24 April 2007



Overview

- **Review of the National Aeronautics R&D Policy and Executive Order**
- **Strategy for Development of the National Aeronautics R&D and Infrastructure Plans**

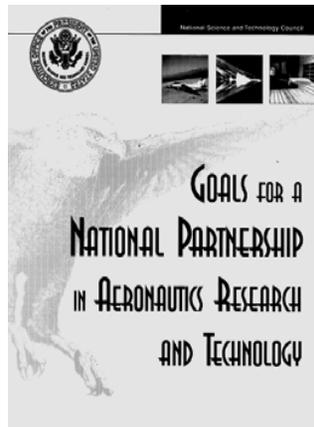


Background/Historical Perspective - I



Previous reports and studies indicated national needs:

- OSTP, “Aeronautical Research & Technology Policy” Report, 1982
- OSTP, “National Aeronautical R&D Goals”, 1985 & 1987
- OSTP/NSTC, “Goals for a National Partnership in Aeronautics Research and Technology”, 1995
- NRC, “A System in Peril” Report, 2002
- Commission on the Future of the United States Aerospace Industry, 2002





Background/Historical Perspective - II



- **NSTC Aeronautics S&T Subcommittee created Sept. 2005**
 - Prioritize aeronautical research, including establishing a set of specific research objectives
 - Develop a S&T roadmap to address the objectives
 - Address coordination of aeronautics research across the Federal government
- **NASA Authorization Act of 2005 (December 2005)**
 - “The President shall develop a national policy to guide the aeronautics research and development programs of the United States through 2020...”
 - Shall “include national goals for aeronautics R&D...describe the role and responsibilities of each Federal agency that will carry out the policy.”



NSTC Aeronautics S&T Subcommittee



- **Membership**
 - OSTP/NASA (Co-Chairs)
 - Department of Defense
 - Department of Transportation
 - Department of Commerce
 - Department of Energy
 - Department of Homeland Security
 - National Science Foundation
 - Department of State
 - US International Trade Commission
 - Executive Office of the President
- **Outreach to Academia, Industry, Aviation User Community**
- **Final approval of Policy and EO December 20, 2006**



Overview: National Aeronautics R&D Policy



- **Establishes Principles**
- **Sets Policy Goal and Objectives**
- **Creates General Guidelines for Federal Government**
- **Establishes Specific Guidelines**
- **Implementation Guidelines**



Policy Goal



“Advance U.S. technological leadership in aeronautics by fostering a vibrant and dynamic aeronautics R&D community that includes government, industry, and academia.”



Policy Principles

1. ***Mobility*** through the air is vital to economic stability, growth, and security as a nation
2. Aviation is vital to ***national security*** and ***homeland defense***
3. Aviation ***safety*** is paramount
4. ***Security*** of and within the aeronautics enterprise must be maintained
5. The US should continue to possess, rely on, and develop its world-class aeronautics ***workforce***
6. Assuring ***energy availability*** and ***efficiency*** is central to the growth of the aeronautics enterprise
7. The ***environment*** must be protected while sustaining growth in air transportation



Policy Objectives

- 1. Provide long-term stability and focus in innovative research**
- 2. Pursue and develop promising advanced aircraft concepts and technologies for:**
 - The military**
 - To enable increased air traffic capacity and new aircraft concepts in the national airspace**
- 3. Pursue a coordinated approach to managing US Government aeronautics RDT&E infrastructure**
- 4. Identify the roles of the Federal Government in aeronautics R&D and the interrelationship with the private sector**
- 5. Cultivate an R&D environment that enables a globally competitive US aeronautics enterprise**
- 6. Enhance coordination and communication within the Federal Government**
- 7. Strengthen mechanisms to engage partners in industry and academia**



General Policy Guidelines

- **Role of the Federal Gov. in Aeronautics R&D:**
 - National defense and homeland security
 - Long-term fundamental aeronautics research
 - More advanced, applied civil aeronautics research for:
 - Public Interest
 - R&D to address gaps
 - Government internal R&D
- **Aeronautics Workforce**
- **Academic Cooperation**
- **Commercial Cooperation**
- **International Relations**

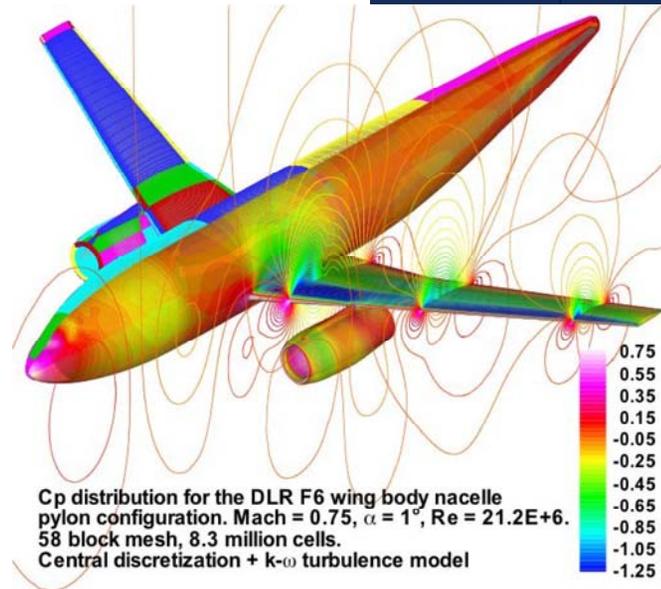
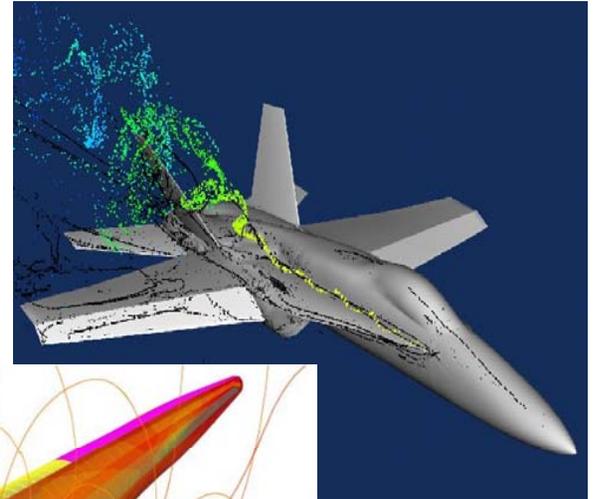
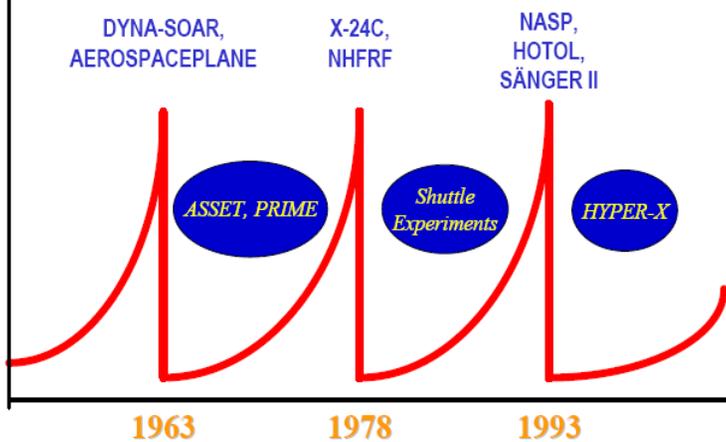


Specific Guidelines

- **Stable and Long-term Foundational Research**

History of Hypersonics
(SAB Study, 2000)

“Old Faithful:” Cyclical Fits and Starts





Specific Guidelines



- **Advanced Aircraft Systems Development**



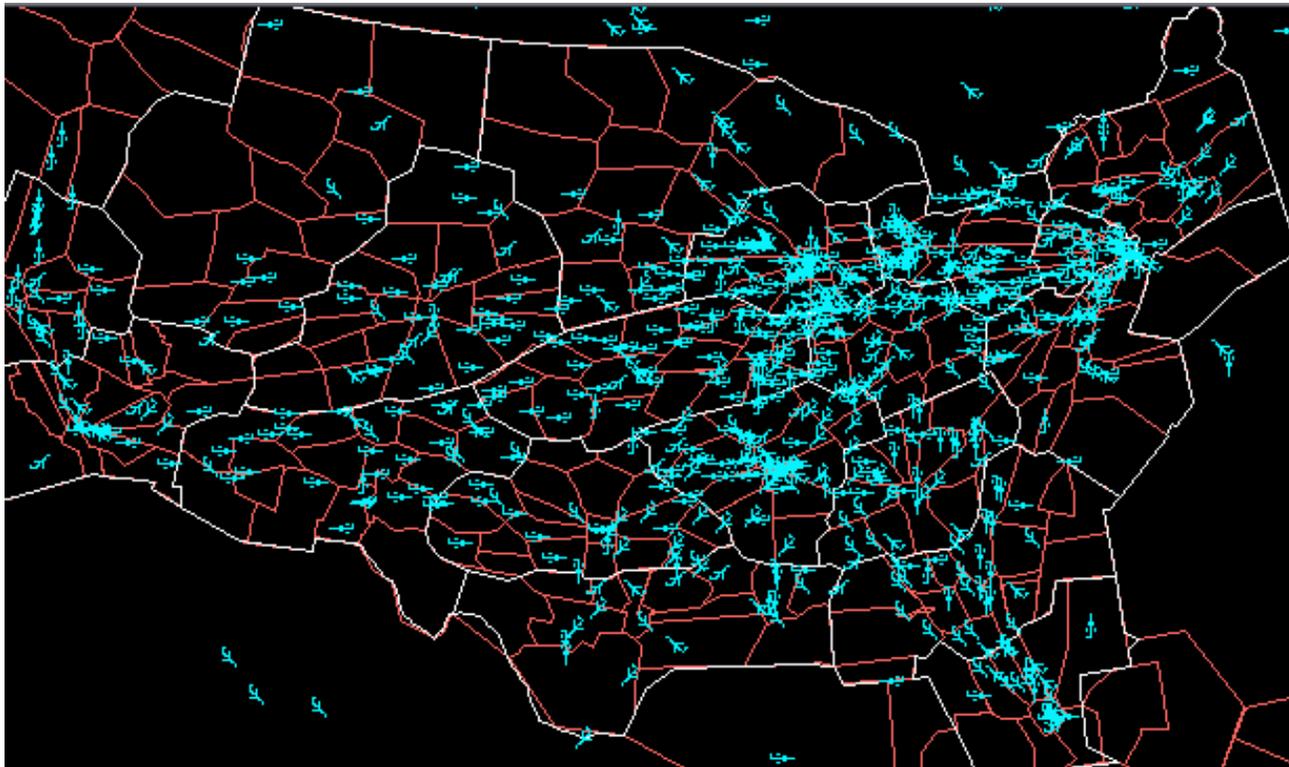
NASA Dryden Flight Research Center Photo Collection
<http://www.dfrc.nasa.gov/Gallery/Photo/index.html>
NASA Photo: ED06-0198-50 Date: October 24, 2006 Photo By: Tony Landis

Boeing's sub-scale X-48B Blended Wing Body technology demonstrator shows off its unique lines on the vast expanse of Rogers Dry Lake adjacent to NASA Dryden.



Specific Guidelines

- Air Transportation Management Systems





Specific Guidelines

- **National Research, Development, Test, and Evaluation Infrastructure**





Policy and EO Implementation Guidelines



- **National Aeronautics R&D Plan**
 - Priorities and objectives, roadmaps, timelines
- **Aeronautics RDT&E Infrastructure Plan**
- Engagement with non-Federal stakeholders
- Dissemination of R&D results
- Other innovative policies and approaches that complement and enhance Federal activities
- Biennial review procedure



Strategy for Development of Plans



- **Creation of R&D Coordinating Groups:**
 - **Mobility**
 - **National Security and Homeland Defense**
 - **Aviation Safety**
 - **Aviation Security**
 - **Energy and Environment**
 - **RDT&E Infrastructure**



Contents of National Aero R&D Plan



- **State-of-the-art of each Principle - where we are as a Nation today**
- **Top-level prioritized National aeronautics R&D goals and objectives (including numerical targets if appropriate) by timeline - where we want to go as a Nation**
 - **Near-term (5 years)**
 - **Mid-term (5-10 years)**
 - **Far-term (>10 years)**
- **Summarize R&D activities and develop top-level timelines - how we get there**
- **Identify significant gaps and/or unnecessary duplication**
- **Identify multi-disciplinary cross-cutting areas of aeronautics R&D**



Contents of Infrastructure Plan



- **Determination of assets that are considered critical from a national perspective and definition of an approach for constructing, maintaining, modifying or terminating these assets**
- **Development of cost and usage policies that facilitate interagency cooperation and utilization – as well as appropriate access by non-federal users**
- **Improvements for coordination of RDT&E needs among the US Government and across the broader user community**



National Aeronautics R&D Plan Timeline - 2007



Coord. Groups "finished" –
NLT Sept. 3

Final Release
– NLT Dec. 30

April May June July Aug. Sept. Oct. Nov. Dec.

Aero S&T
Subcomm.

Monthly Update Meetings

Planning and Execution of Rollout



1st Outreach April 24

Integration, Public posting
for comments

Coordinating
Groups

AST Subcomm.
Signoff

Final Coordination



Each CG have first meetings

Outreach Sessions for
each CG

Deliver Plans to ASTS
for integration

NSTC COT



NSTC COT
clearance

OSTP



Dr. Marburger clearance
NLT Dec. 20



Meeting Guidelines

**Compliance with the
Federal Advisory Committee Act
&
Government in the Sunshine Act**



FACA Overview

- **FACA Applies to**
 - **Meetings between Government & Non-Government Personnel**
 - **Where there is a Cohesive Group Structure under Agency Control**
 - **Resulting in Group Consensus**
 - **Regarding Specific Advice on Policy**
- **Official Charter, Membership Requirements, Noticed & Open Meetings, And Other Regulatory Requirements**



General Meeting Format

- **Informal Structure, Ad Hoc Basis, Meetings called as necessary by Subcommittee Working Groups**
- **Open to the Public, No strict Membership**
- **Meetings will be Noticed in the Federal Register & the Subcommittee Website**
- **Opportunity for the Subcommittee to Provide the Public with Information on its Progress**
- **Public to Provide Facts and Information Relevant to the Development of an R&D Policy**



General Meeting Format (cont.)



- **These meetings will NOT be:**
 - **Drafting sessions**
 - **Opportunities for Government and the Public to agree on Specific Policies**



Coordinating Groups Co-Leads



- **Mobility**
 - JPDO, NASA
- **National Security and Homeland Defense**
 - DOD
- **Aviation Safety**
 - FAA, NASA
- **Aviation Security**
 - DHS
- **Energy and Environment**
 - DOD, DOE, FAA
- **RDT&E Infrastructure**
 - DOD, NASA



Call for White Papers



Call for White Papers – R&D Plan



- **Articulate the most important aeronautics R&D challenges facing our nation**
- **Identify well-defined technical aeronautics goals and objectives (with numerical targets if appropriate) by the three timeframes**
- **Propose promising R&D approaches to advance the future of national aeronautics knowledge and/or capabilities**
- **Identify fundamental limitations and knowledge barriers**
- **Identify promising innovations and possible timelines**



Call for White Papers - RDT&E Infrastructure



- How to develop consistent cost and usage policies?
- What RDT&E assets are “critical from a national perspective”?
- How to develop and implement measures to improve coordination of user needs across the US Government and the broader user community?
- How to define an “approach for constructing, maintaining, modifying, or terminating” RDT&E assets?



Call for White Papers



- 1-3 pages
- Due COB May 11, 2007
- Submit to:
 - Mobility: aero.mobility@ostp.gov
 - National Security and Homeland Defense: aero.defense@ostp.gov
 - Aviation Safety: aero.safety@ostp.gov
 - Aviation Security: aero.security@ostp.gov
 - Energy and Environment: aero.energy-environment@ostp.gov
 - RDT&E Infrastructure: aero.infrastructure@ostp.gov

www.ostp.gov/nstc/aeroplans