

National Aeronautics RDT&E Infrastructure Plan

43rd Joint Propulsion Conference

11 July 2007

Purpose of Outreach Meeting

- **Provide Context of National Aeronautics RDT&E Infrastructure Plan (IPLAN)**
- **Explain IPLAN Strategy and Approach**
- **Discuss Information Gathering Approach**
- **Provide Information Relating to:**
 - **Schedule**
 - **RDT&E Infrastructure Coordinating Group (ICG) Members**

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National Aeronautics R&D Policy



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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**

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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.”

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 Implementation Guidelines

- **Write Two Plans**
 - **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 Six Coordinating Groups:**
 - **Mobility**
 - **National Security and Homeland Defense**
 - **Aviation Safety**
 - **Aviation Security**
 - **Energy and Environment**
 - **RDT&E infrastructure**

Contents of Infrastructure Plan

- **Determination of assets (capabilities) that are considered critical from a national perspective**
- **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 U.S. Government and across the broader user community**

Our Task

- **Identify assets, or types of assets, considered critical to support the goals and objectives identified by the five other coordinating groups**
- **Develop the RDT&E Infrastructure Plan (“IPLAN”) to support the R&D Plan**
 - Coordinated through the National Science and Technology Council (NSTC)
 - Published by the NSTC
 - One year from the policy
 - Updated every two years

IPLAN Report

Table of Contents

Executive Summary

1. Introduction (The scope of the plan and the starting assumptions)
2. Requirements for aeronautical RDT&E infrastructure capabilities identified by the other Coordinating Groups – near, mid and long term
3. Components of the aeronautical RDT&E infrastructure that are critical assets – near, mid and long term
4. Management Plan for Critical Federal RDT&E Infrastructure Assets
5. Plan/policy for U.S. reliance on non-government and foreign infrastructure assets

Outreach Approach

Purpose of Outreach: Obtain Output

- **Government Infrastructure Assets**
 - IGC review of existing studies/reports/data
- **Industry Infrastructure Assets**
 - AIAA Ground Test Aeronautics Working Group
 - Self-forming and self-sustaining
- **Exposure to National Aeronautics Community**
 - Aeronautics Science & Technology Subcommittee (ASTS) home page
(<http://www.ostp.gov/nstc/aeroplans/index.htm>)
 - 43rd JPC, Cincinnati, OH (11 Jul 07)

RDT&E Infrastructure Issues

Call for White Papers

- 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?

Submit White Papers

RDT&E Infrastructure:

aero.infrastructure@ostp.gov

For More Information:

<http://www.ostp.gov/nstc/aeroplans/index.htm>

Additional Information Contact:

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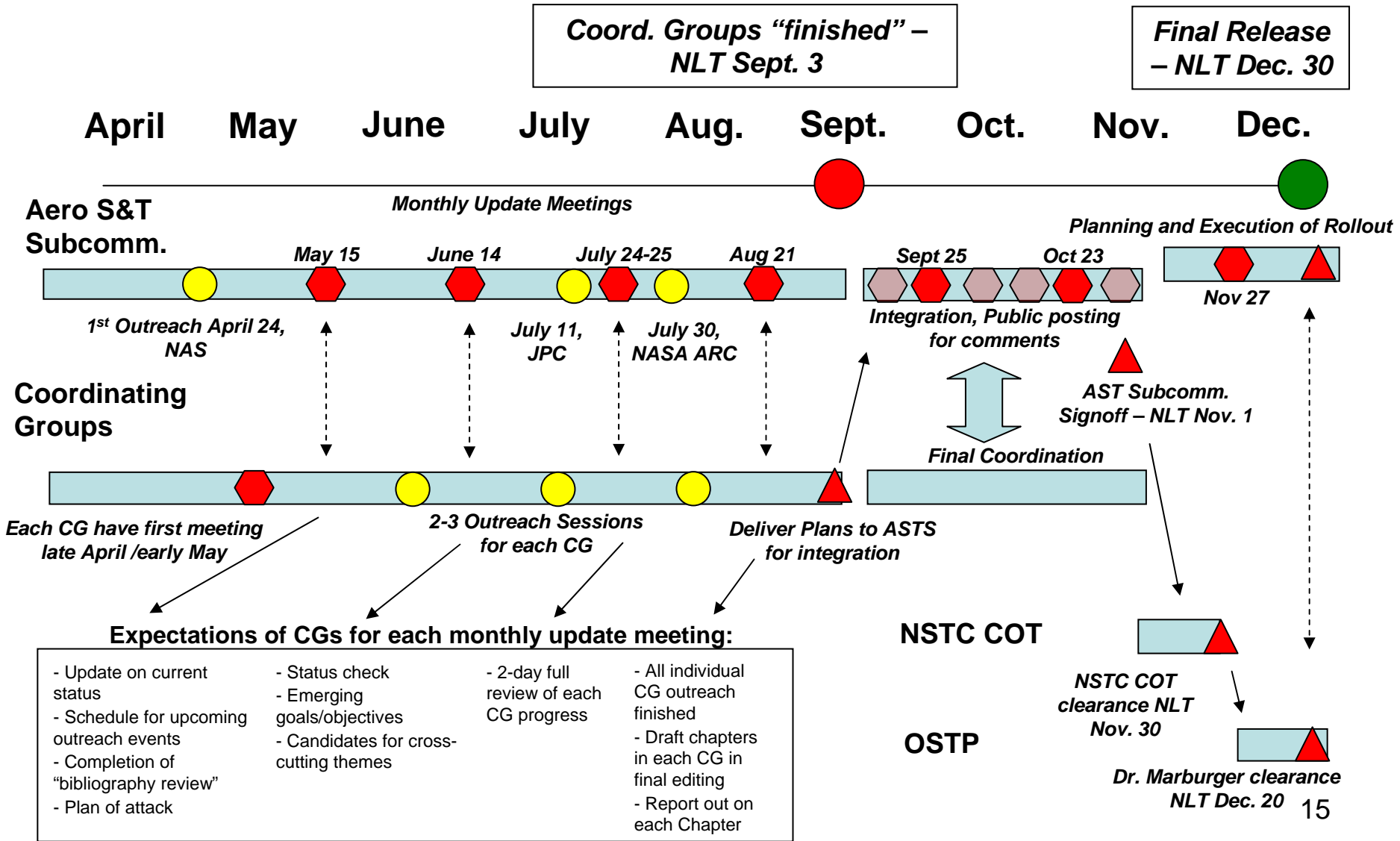
kadams@ida.org or (703) 575-6671

or

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Mark.Amundson@osd.mil or (703) 601-5214

National Aeronautics R&D Plan Timeline – 2007 (v.4 USG)



RDT&E Infrastructure Coordinating Group (ICG)

Co-Chairs:

Mr. Blair Gloss, NASA
Ms. Phyllis Ferguson, DoD

Other Members:

Mr. Tom Best DoD
Dr. Andrew Mark, DoD
Mr. Dick Johns, DoT
Mr. Dan Cicero, DoE
Dr. Susan Hallowell, DHS
Mr. Rob Pappas, FAA
Ms. Cathy Schulbach, NASA
Ms. Gwynn Severt, NASA
Mr. Todd Turner, DoD
Mr. Mark Amundson, TRMC

Backup

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**

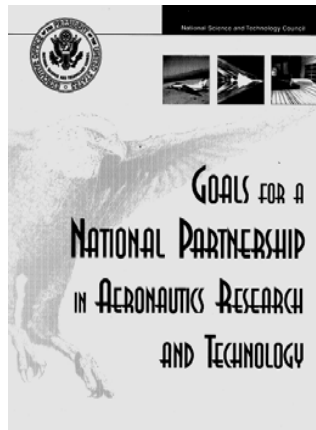
Overview

- **Background and historical perspective on aeronautics R&D policy at the national level**
- **Brief summary of the *National Aeronautics R&D Policy***
- **Plans to prepare the National Aeronautics R&D Plan and the National Aeronautics R&D Infrastructure Plan**

Background

Previous reports and studies indicated national needs:

- **OSTP, “Aeronautical Research & Technology Policy” Report, 1982**
- **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

- **NSTC Aeronautics S&T Subcommittee established**
 - 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.”

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

General Policy Guidelines

- **Role of the Federal Government 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**