

# Joint Planning and Development Office (JPDO)

## Unmanned Aircraft Systems (UAS)

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Integration and Strategic  
Interagency Initiatives, JPDO

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# NextGen and JPDO Overview

- **NextGen** is a Congressionally mandated initiative to modernize the U.S. Air Transportation System in order to
  - Increase capacity and reliability
  - Improve safety and security
  - Minimize the environmental impact of aviation
- Under the 2003 VISION 100 – Century of Aviation Reauthorization Act (P.L. 108-176, reaffirmed by P.L. 112-95 – FAA Modernization and Reform Act of 2012), Congress created the **Joint Planning and Development Office (JPDO)** to manage the partnerships designed to bring NextGen online.

# NextGen Improvements



# JPDO's Interagency Focus



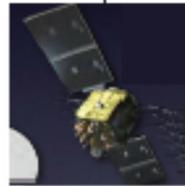
Multi-Agency  
Leadership



Advanced  
Aviation  
Operations  
& Safety



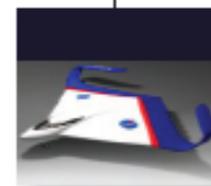
Intelligent  
Weather  
Solutions



Advanced  
Operations  
& Security



Enhanced  
Layered  
Security



Aeronautics  
Research  
& Technology



National  
Policy

Integration and Collaboration

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# JPDO Organization

## JPDO Senior Policy Committee

The SPC oversees the work of the JPDO. The Committee is chaired by the Secretary of Transportation and includes cabinet-level representatives from NextGen partner agencies. It works to provide policy guidance, resolve major policy issues, and identify and align resource needs.

## JPDO Board

An adjunct to the SPC, the JPDO Board consists of senior representatives from participating Federal agencies. Each Board member reports to his or her respective SPC member.

# UAS Integration in the NAS

## OMB Request

The Joint Planning and Development Office (JPDO) Senior Policy Committee should lead efforts with the NextGen partners to achieve the integration of Unmanned Aerial Systems (UAS) into the National Airspace System. An initial program plan that identifies National goals for UAS integration, agency requirements, transition steps, coordination activities, and milestones should be completed by September 30, 2012.

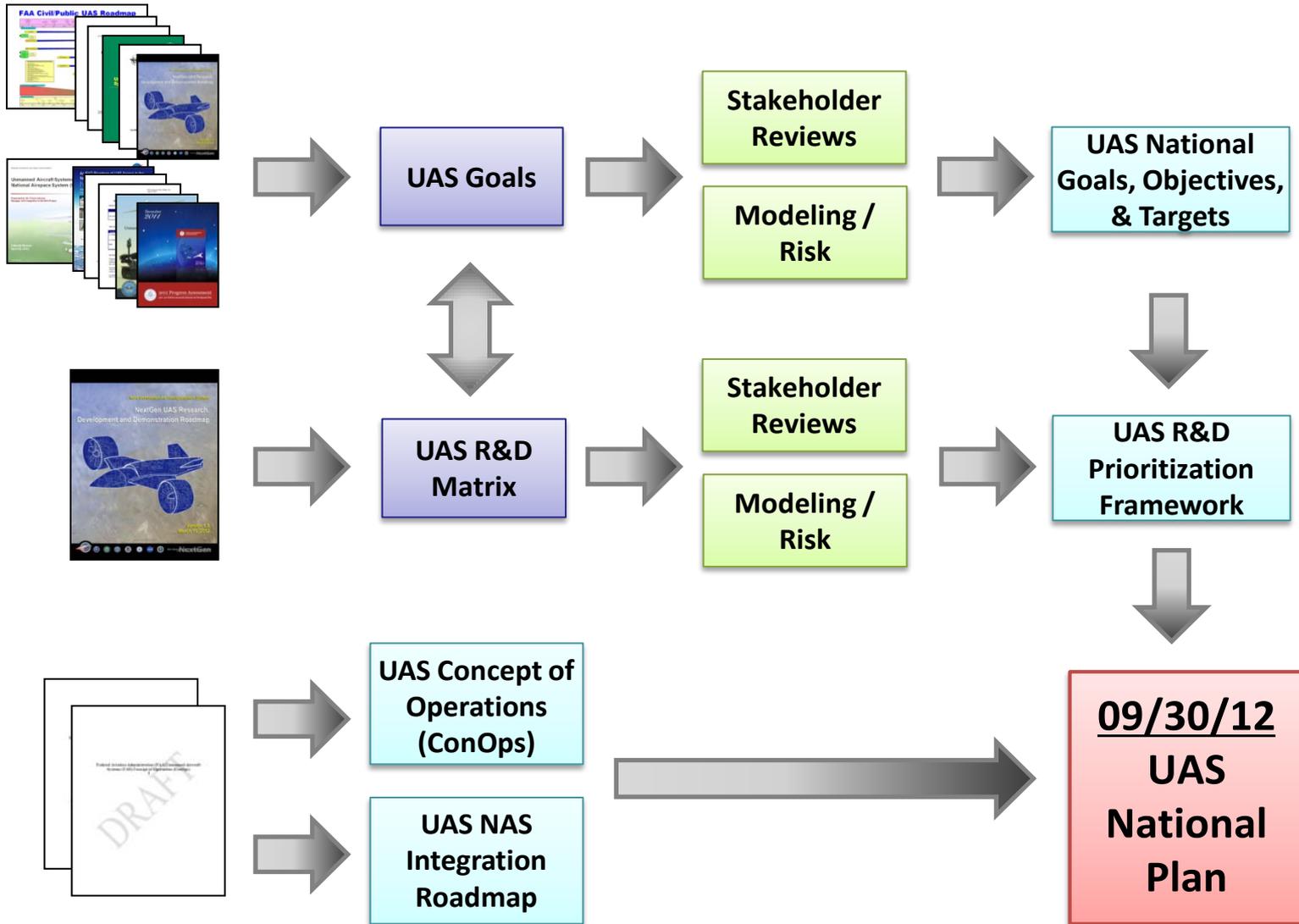
## FAA Reauthorization

Not later than 270 days after the date of enactment of the this Act, the Secretary of Transportation, in conjunction with representatives of the aviation industry, Federal agencies that employ unmanned aircraft systems technology in the national airspace system, and the unmanned aircraft systems industry, shall develop a comprehensive plan to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system.

# Senior Policy Committee (SPC) Direction

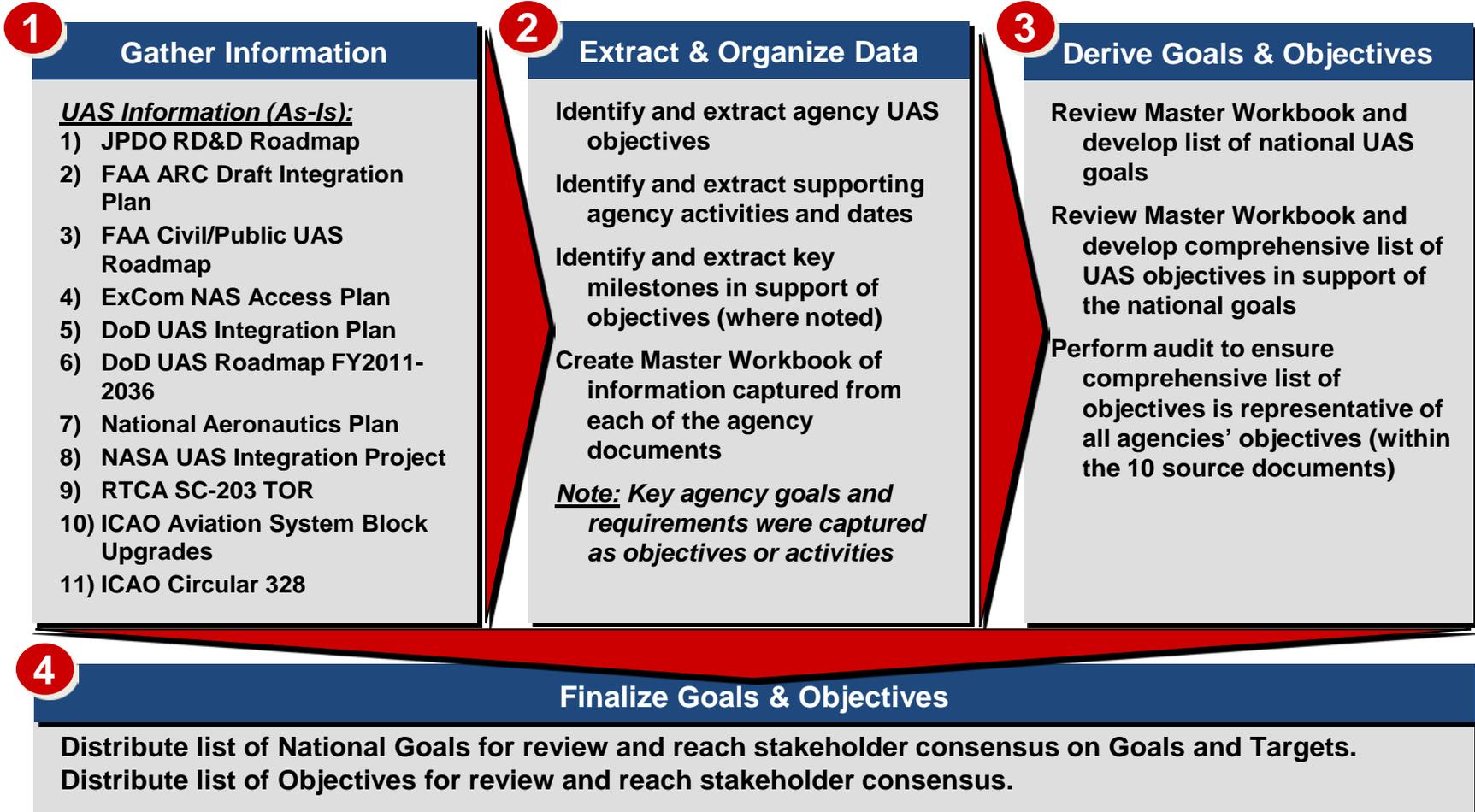
- The JPDO, with partner agency participation, will create the preliminary national UAS plan by September 30, 2012 to gain mutual agreement on requirements and phasing.
- The plan should include
  - A program framework identifying key decision points in 2015 and later.
  - Definitions of the characteristics of safe UAS integration in 2015 – to include test sites and small UAS (sUAS). Coordinate with the FAA.
  - A common concept of operations to guide efficient Federal resources planning.
  - Initial assessment of NextGen R&D priorities for “Integrate” and “Evolve” phases, including policies, regulations, or procedures.

# UAS National Plan Development



# Development of National Goals & Objectives

Assess current key roadmaps and published documents to determine National Goals and Objectives for UAS integration.



# UAS National Goals and Objectives

## Agency Representatives

- **DOC**
  - *Executive Representatives:* Michael Devany, Robert Detrick, Sandy MacDonald
  - *Working Level Representatives:* Brad Kearse, Robbie Hood, Phil Kenul, John Coffey
- **DOD**
  - *Executive Representatives:* Steve Pennington, Juan Narvid
  - *Working Level Representatives:* Anthony Militello
- **DHS**
  - *Executive Representatives:* Rich Booth, John Appleby
  - *Working Level Representatives:* Wayne Brown, Travis Long
- **FAA**
  - *Executive Representative:* Jim Williams
  - *Working Level Representatives:* Rick Prosek, Randy Willis, Sabrina Saunders-Hodge, Steve VanTrees
- **NASA**
  - *Executive Representatives:* Ed Waggoner, Cathy Bahms
  - *Working Level Representatives:* Chuck Johnson, Davis Hackenberg, R.H. Schlatter

# UAS R&D Prioritization

## Through FY12

### Section IV: UAS NextGen R&D Priorities (Initial)

#### Accomplishments

The UAS NextGen R&D prioritization analysis has established a traceable framework linking R&D Activities and R&D Tasks to

- UAS National Goals
- R&D Challenges in the JPDO RD&D Roadmap Report
- Achieve the JPDO's Target 2025 vision
- UAS-related Objectives in the 2010 National Aeronautics R&D Plan

Analyzed 244 prospective R&D Tasks with respect to the UAS National Goals.

Developed a traceable and repeatable methodology for prioritization.

Initial assessment to identify highest-priority R&D Tasks (*Safety Critical R&D for 2020 Goals, the first Goals following initial integration in 2015.*)

Developed a database relating the R&D Tasks and their relative priorities (*R&D requirements*) to the 23 R&D Challenges (*R&D inventory*).

Reviewed the methodology and results with points of contact in each of the partner agency and addressed their comments.

Identified the relationship between the R&D Task and the R&D needs to achieve the JPDO's Target 2025 vision.

## FY13

### UAS NextGen R&D Priorities

#### Accomplishments

The UAS NextGen R&D prioritization analysis with our NextGen partner agencies against two products

1. UAS ConOps, developed by the FAA
2. UAS NAS Integration Roadmap, developed by the FAA

A foundation to support work with our NextGen partner agencies

- Aligning priorities with the FAA's UAS ConOps
- R&D gap analysis
- Assessment against NextGen planning
- Developing plans for UAS-related R&D
- Assessing progress toward the UAS National Goals, Target 2025 vision, and the UAS-related objectives in the National Aeronautics R&D Plan

Identify further steps to plan, coordinate, and assess progress of R&D needed to achieve the UAS National Goals. Update, validate, and continue to refine

- The UAS R&D prioritization database, including possible incorporation of R&D needs associated with policy decisions and mitigation of identified risks.
- The prioritization methodology and results in coordination with the JPDO partner agencies.

# JPDO UAS Activities for FY13

- The JPDO, with partner agency support, will complete the prioritization and gap analysis of UAS research tasks within the UAS National Plan and recommend their inclusion in the appropriate department of agency plans.
- The effort should include simulations of relevant UAS scenarios in order to identify potential risks that could delay integration efforts.
- The JPDO should also assess critical policy issues and provide recommendations on how best to address those issues.

# UAS Comprehensive Plan Development Schedule

- **September 30:** Receive and package four UAS products into the National Plan *(Complete)*
- **October 1 - 9:** Coordinate UAS partner-agency working-level review to identify major inconsistencies between the four National Plan sections *(Complete)*
- **October 10:** JPDO SPC convenes *(Complete)*
- **October 15:** JPDO Board convenes *(Complete)*
- **October 9 - 23:** Review partner agency feedback, coordinate updates and edits to develop the UAS Comprehensive Plan based on the UAS National Plan
- **October 23 - November 12:** Develop UAS Comprehensive Plan for FAA agency coordination
- **November 12:** Comprehensive Plan enters formal Department of Transportation (DOT) review cycle with submittal to FAA Lines of Business and JPDO Board
- **November – December:** JPDO to brief Office of Management and Budget (OMB) on National Plan
- **February 14:** UAS Comprehensive Plan submitted to Congress

# Comprehensive Plan Contents

- A. Rulemaking conducted under (b), a subsection regarding small UAS
- B. Methods to enhance technologies and subsystems necessary for safe and routine operation of civil UAS
- C. Phased-in approach to civil UAS integration into the NAS
- D. Timeline for phased-in integration
- E. N/A
- F. Airspace designation of cooperative manned and UAS operations in the NAS
- G. Establishment of a process to develop certification, flight standards, and air traffic requirements for civil UAS at test ranges
- H. Methods to ensure safe operation of civil and public UAS simultaneously in the NAS
- I. Incorporation of the plan into the annual NextGen Implementation Plan