



Federal Aviation  
Administration

# Aviation Weather Services

## NextGen Activity Status

Presented to: Friends and Partners in Aviation Weather (FPAW)

By: Jacqueline Hill, Manager , Aviation Weather Services

Date: October 21, 2010

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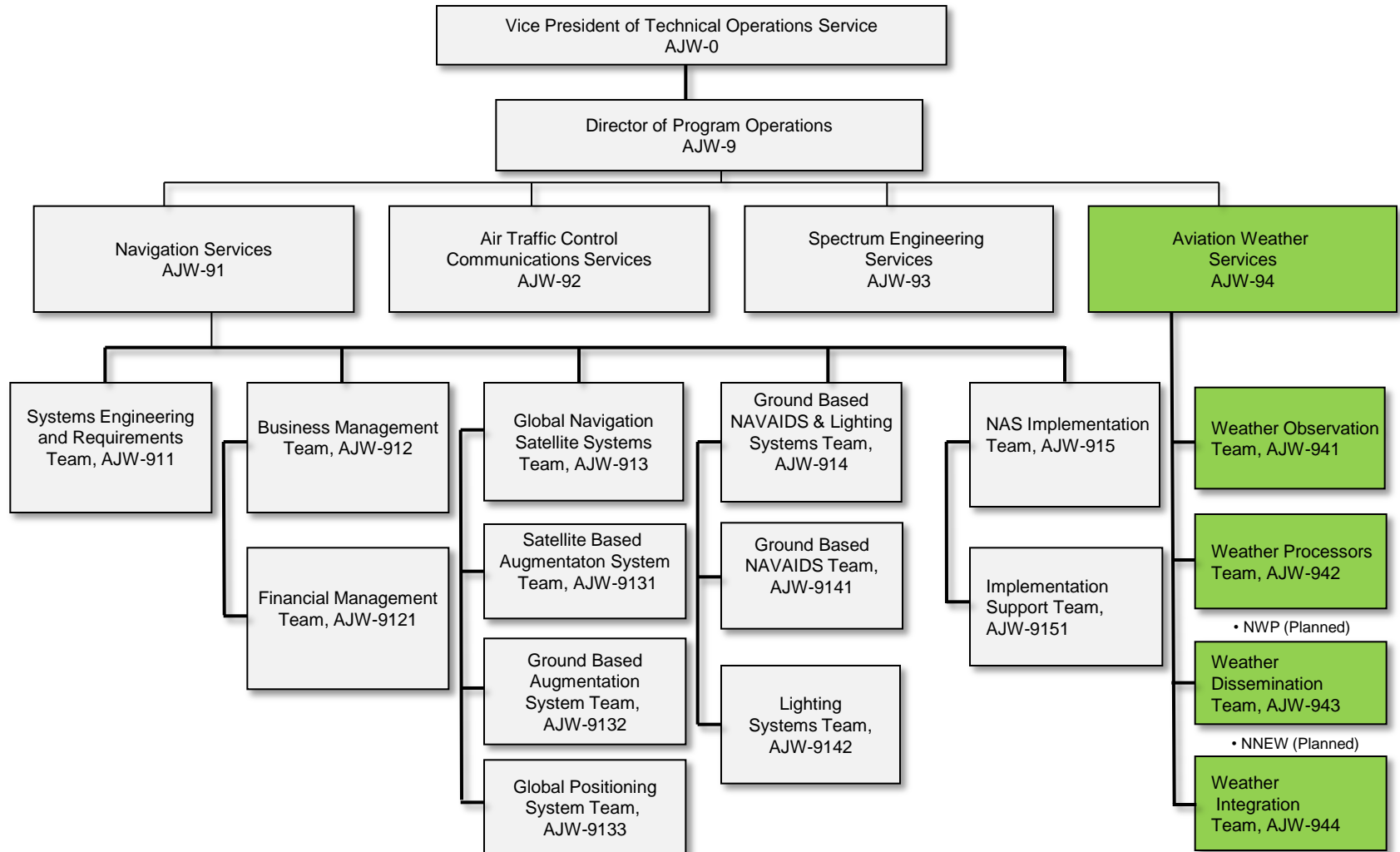


# Aviation Weather Services

- Established in October 2009 as the single focal point for weather programs, requirements and weather services
  - Realigned under Technical Operations Business Unit
  - Over 25 programs including portfolios
- Enables a System-wide view of Weather
- Enables a portfolio approach to Weather investments (prioritization)
- More efficient transition of new weather capabilities from research to implementation



# Technical Operations – Program Operations



# Weather Services Responsibilities

- Plan, acquire, implement, and support FAA National Airspace System (NAS) weather services
- Provide automated weather observations systems that provide real-time observations to FAA controllers, commercial and general aviation pilots, and to the National Weather Service for inputs into various models
- Provide weather processor systems that generate integrated weather information to be used by stakeholders in the NAS
- Provide weather dissemination systems that enable users common access to weather information
- Improve transition planning and implementation of new weather products and services

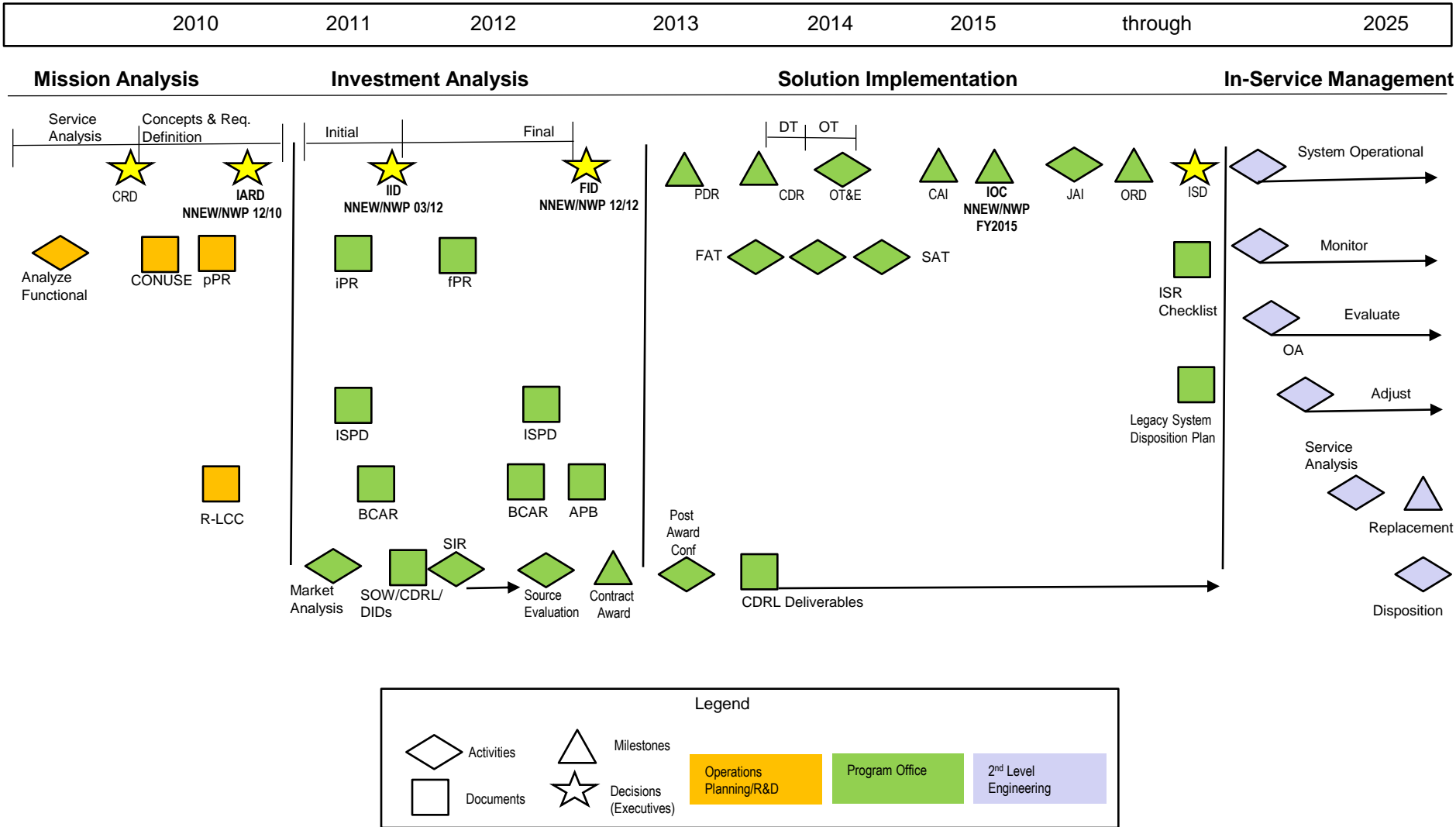


# NextGen Weather Initiatives

- NextGen Weather Processor (NWP)
  - Provides advanced weather capabilities
  - Provides CIWS and WARP/Radar and Meteorological Processor functionality
  - Enables integration of weather information into automated DSTs
- NextGen Network Enabled Weather (NNEW)
  - Cost effective dissemination of weather information through standardization of weather services



# Acquisition Management Process – NNEW & NWP Segment 1 Integrated Program Schedule



# NNEW Program Status

- Ongoing collaboration between Aviation Weather Group (AJP-68) and Aviation Weather Services Dissemination Team (AJW-943) to ensure readiness for investment analysis
  - Closing on preparation to meet an Investment Analysis Readiness Decision in December 2010 (AJW-943 supporting)
  - SE deliverables are in management review and approval process (e.g., Concept of Use, Preliminary Program Requirements, Alternatives Descriptions)
  - Financial deliverables (e.g., Rough Order of Magnitude, Shortfall Analysis) are in ATO Finance review and approval process





# NWP Program Status

- Ongoing collaboration between Aviation Weather Group (AJP-68) and Aviation Weather Services Processors Team (AJW-942) to ensure readiness for investment analysis
  - On-track for meeting Investment Analysis Readiness Decision milestone in December 2010
  - SE deliverables are in management review and approval process (e.g., Concept of Use, Preliminary Program Requirements, Alternatives Descriptions)
  - Financial deliverables (e.g., Rough Order of Magnitude, Shortfall Analysis) are in ATO Finance review and approval process



# NextGen Weather Processor (NWP)

- **Consolidates Corridor Integrated Weather System (CIWS) and Weather And Radar Processor (WARP)**
- **Improves weather information to the users (directly and indirectly)**
  - Provides advanced weather information (e.g., 0-8h convective forecasts)
  - Enables improved collaborative planning and efficient utilization of resources (e.g., airspace, airports)
  - Optimizes operations & reduce the impact of weather from gate to gate
  - Provides information that has better latency, coverage area and data quality
- **Enables integration of weather constraints into automated DSTs (e.g. Convective Weather Avoidance Model [CWAM] for Traffic Flow Management System [TFMS] )**



# NextGen Network Enabled Weather (NNEW)

- Delivers cost effective universal access to a single source of weather information through standardization of weather services (independent of system or platform).
- Implements open system data standards to enable weather interoperability with NextGen partner agencies.
- Provides the ability for the user to obtain weather information based on operational specific parameters (i.e., extraction/filter capability) and reduces bandwidth constraint.
- Provides adaptors to ensure that the legacy systems are not required to change their system interfaces.

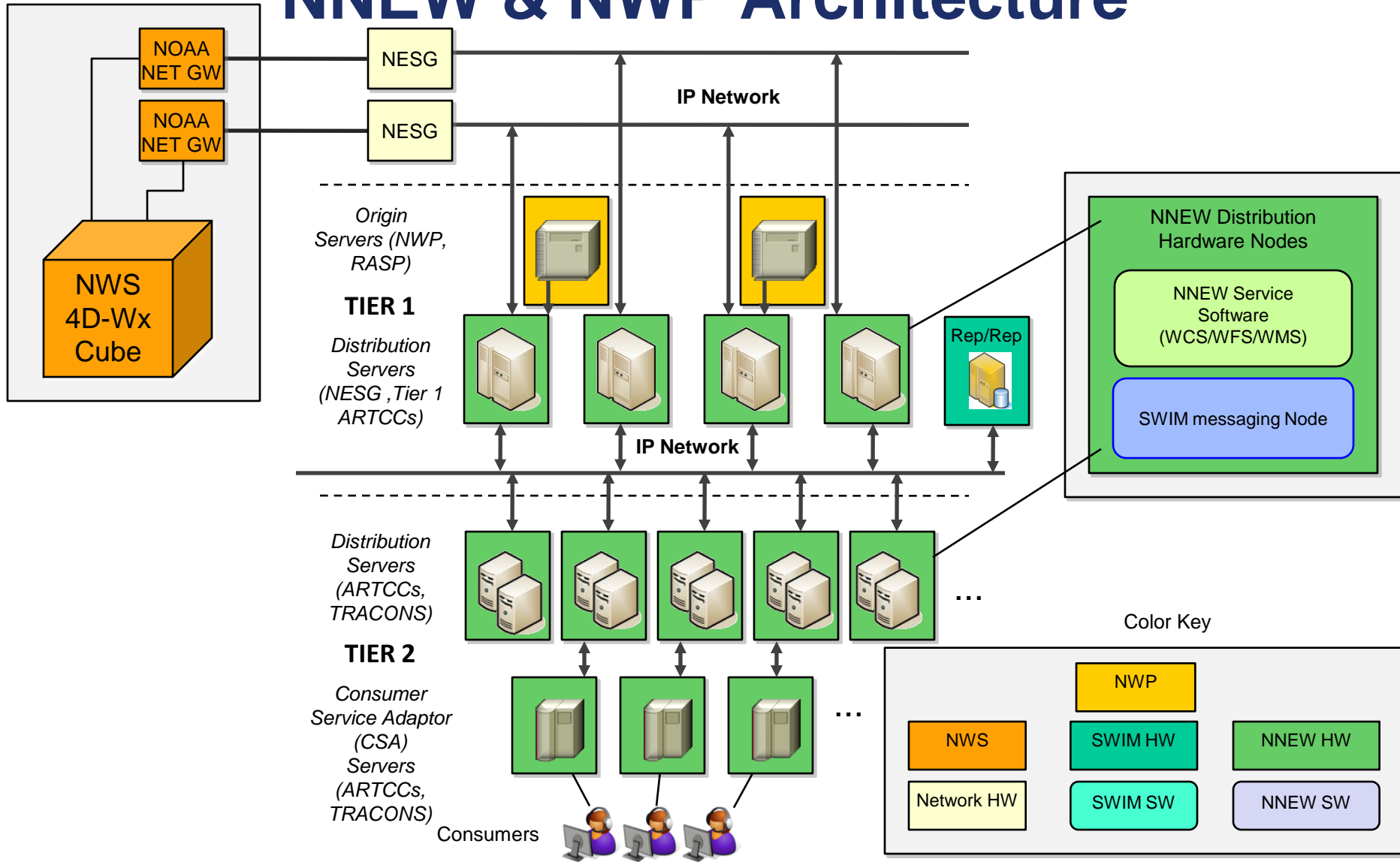


# Weather User Needs Validation

- **Based on current weather information, gaps in weather information, and improved technology**
- **The process included:**
  - User questionnaires
  - Brainstorming activities
  - Presentations
  - Facilitated focused discussions
- **The focus group members were selected based on:**
  - Familiarity with weather information systems
  - Air traffic control experience
  - Meteorological region
  - Facility type
- **Two sessions held July 26-29, 2010 and August 23-26, 2010**
- **Report will be available November 2010**



# NNEW & NWP Architecture



# Questions?



# Backup Information



# Acronyms

APB (Acquisition Program Baseline)  
BCAR (Business Case Analysis Report)  
CAI (Contractor Acceptance / Inspection)  
CDR (Critical Design Review)  
CDRL (Contract Data Requirements List)  
CONUSE (Concept of Use)  
CRD (Concept and Requirements Definition)  
DID (Data Item Descriptions)  
EA (Enterprise Architecture)  
FID (Final Investment Decision)  
FPAW (Friends and Partners in Aviation Weather)  
fPR (Final Program Requirements)  
IARD (Investment Analysis Readiness Decision)  
IID (Initial Investment Decision)  
IOC (Initial Operating Capability)  
iPR (Initial Program Requirements)  
ISD (In-Service Decision)  
ISPD (Implementation Strategy and Planning Document)  
ISRC (In-Service Review Checklist)  
JAI (Joint Acceptance Inspection)  
JPDO (Joint Planning & Development Office)  
LCC (Life Cycle Cost)

NAS (National Airspace System)  
NNEW (NextGen Network Enabled Weather)  
NWP (NextGen Weather Processor)  
NWS (National Weather Service)  
OA (Operational Analysis)  
ORD (Operational Readiness Demonstration)  
OT&E (Operational Test & Evaluation)  
PAT (Production Acceptance Test)  
PDR (Preliminary Design Review)  
POC (Point-of-Contact)  
pPR (Preliminary Program Requirements)  
RAPT (Route Availability Planning Tool)  
RI (Reference Implementation)  
SAT (Site Acceptance Test)  
SIR (Screening Information Request)  
SOW (Statement of Work)

