

SEGMENT ONE NEAR TERM DEMONSTRATIONS

Integration of Ground and Cockpit Weather into Decision Making

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Federal Aviation
Administration



Next Generation Air Transportation System (NextGen)



Flight Planning	Flight Data	Aeronautical Information	Enterprise Services	Geospatial Information	Communication	Performance Metrics
Environment	Layered Adaptive Security	Surveillance		Position, Navigation, and Timing	Safety	Weather
Net Centric Infrastructure Services			Network-Enabled Information Access			

Questions/Comments:
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Objectives of WTIC

- **The objective of the Weather Technology in the Cockpit (WTIC) program is to ensure the adoption of cockpit, ground, and communication technologies, practices, and procedures that will:**
 - Provide pilots with shared and consistent weather information to enhance common situational awareness
 - Provide airborne tools to exploit the common weather picture
 - utilize the “aircraft as a node”, functions to autonomously exchange weather information with surrounding aircraft and ground systems
 - Facilitate integration of weather information into cockpit NextGen capabilities (e.g. Trajectory Based Operations)
 - Result from WTIC R&D supporting certification and operational approvals

What Must Be Accomplished to Effectively Conduct Weather Technology in the Cockpit Services and Operations

1. **What incremental weather information is needed in cockpit operations (and when is it needed)?**
 - a. For tactical decision support (121, 135, 91)?
 - b. For situational awareness (121, 135, 91)?

What Must Be Accomplished to Effectively Conduct Weather Technology in the Cockpit Services and Operations

- 2. What communication services are needed to provide the weather information needed in cockpit operations as outlined in answering (1) above?**
 - a. Signals in space?
 - b. Ground support /infrastructure (interface/processing/archiving, etc.)?

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3. **What airborne equipage and/or software is needed?**
 - a. Communication equipage/software (121, 135, 91)?
 - b. Interface/processing/storage, etc. equipage/software (121, 135, 91)?
 - c. Display and decision support equipage/software (121, 135, 91)?
 - d. Sensor equipage/software?
 - e. Additions/modifications to existing onboard technologies (e.g. FMS)?

What Must Be Accomplished to Effectively Conduct Weather Technology in the Cockpit Services and Operations

4. **What policy and guidance will need to be modified, created, or rescinded in support of (1) through (3) above (121, 135, 91)?**
 - a. Certifications (avionics, procedures, etc.)?
 - b. Standards?
 - c. Guidance (AIM, Pilots Handbook, etc.)?
 - d. Rules and regulations?

What Must Be Accomplished to Effectively Conduct Weather Technology in the Cockpit Services and Operations

5. **What training will be needed to support and implement the results of (1) through (4) above (121, 135, 91)?**

Thank you

**Please hold questions till end of
Near Term Demonstrations -
Segment One**

