# Enhanced Weather Radar (EWxR)
# Rockwell-NASA Cooperative Research Agreement (CRA)

**PROGRAM/PROJECT:** Weather Accident Prevention Project
**LEAD AGENCY/COLLABORATING AGENCIES:** National Aeronautics and Space Administration (NASA)
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## SERVICE AREA (S)/INITIATIVE (S)

- ***National Aviation Weather Initiatives***:
  N/A

## FUNDING

- ***Programmed/Planned ($'s/FY):*** /FY03 /FY04

## TYPE OF PROGRAM/APPLICATION

R&D/Prototype Demonstration

## SCOPE OF PROGRAM/PROJECT

- ***What's being developed, procured, etc.:*** *technologies and prototype to enable display of combined unlinked and on-board sensed graphical weather radar information in transport cockpits.* Rockwell-Collins will develop and demonstrate a system for processing unlinked weather information from ground sources and combining this information with that from on-board weather radar sensors for display on a graphical weather display in the cockpit.
- ***How will operations be changed/improved:*** *combined data from diverse weather sources will provide a complete weather picture including information sensed in the near-vicinity of the aircraft and forecast data, leading to improved pilot situational awareness and allowing collaborative decision making between pilots, ATC, and AOC. These technologies will assist in the reduction of aircraft accidents attributable to weather.*

## PROGRAM/PROJECT MANAGEMENT

- ***Basic guidance document for this program:*** WxAP Project Plan.
- ***Program/Project verification process:*** NASA sponsored annual Weather Accident Prevention reviews, Aviation Safety Program Executive Council reviews, and reviews/audits at the project/element level.
- ***Method used for end product validation:*** Combination of (a) system-level modeling and simulations, (b) laboratory-based experiments and (c) flight experiments via appropriate industry and/or NASA research aircraft. Many of these validation efforts are performed under cost-shared cooperative research agreements with industry partners.
- ***Operational training for the user:*** Training guidance for the use of new graphical weather information technologies combining forecast and nowcast or in-situ data will be developed in conjunction with the AvSP System Wide Accident Prevention (SWAP) project.

## SCHEDULE/IMPLEMENTATION

- ***Next major program milestone:*** N/A
- ***Program becomes operational:*** The EWxR CRA has been completed and the technology is being integrated into NASA's Airborne Hazard Awareness System (AHAS).
- ***Plans for further improvements:*** N/A