AVIATION SAFETY/AUTOMATION PROGRAM OVERVIEW

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GOAL

PROVIDE THE TECHNOLOGY BASE LEADING TO IMPROVED SAFETY OF THE NATIONAL AIRSPACE SYSTEM THROUGH DEVELOPMENT AND INTEGRATION OF HUMAN-CENTERED AUTOMATION TECHNOLOGIES FOR AIRCRAFT CREWS AND AIR TRAFFIC CONTROLLERS
The Problems

MAN  VEHICLE/STATION

- Human Errors  - Automation Design
- Traffic/Congestion
- Weather Hazards

SYSTEM

Perspective

- Automation can improve the efficiency, capacity and dependability of the national aviation system

— BUT —

- Humans will manage, operate and assure the safety of the next generation system

— THEREFORE —

- Human-centered automation is the key to system effectiveness
Specific Objectives

- To develop the basis, consisting of philosophies and guidelines, for applying human-centered automation to the flight deck and ATC controller station

- To provide human-centered automation concepts and methods to the flight crew which ensure full situation awareness

- To provide human-centered automation concepts and methods for ATC controllers which allow integration and management of information and air-ground communications

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ATC/COCKPIT INTEGRATION

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ATC AUTOMATION & INTEGRATION

INFORMATION MANAGEMENT

TECHNOLOGY TRANSFER

Steering Cmtc; NASA/FAA/Industry Workshops and Technical Conferences
PROGRAM ELEMENT I

HUMAN/AUTOMATION INTERACTION