

# SUMMARY AND NEXT STEPS



Federal Aviation  
Administration



Presented to: AEDT-APMT Workshop #4

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## Accomplishments Summary

- **We have developed**
  - AEDT Version 1.0
  - EDS Version 1.0
  - APMT Version 0.0
- **We have made several upgrades to INM, EDMS, MAGENTA, and SAGE modules for incorporation into AEDT**
- **We are evaluating methods for analyzing trade-offs between noise and emissions and amongst emissions through capability demonstrations and sample problems**
- **We are continuing assessment and uncertainty analysis**



# Way Forward

- **We are developing new modeling capabilities to:**
  - More effectively assess and communicate environmental effects, interrelationships, and economic consequences
  - Facilitate agreements on standards, recommended practices, and mitigation options
  - Enable more informed international and U.S. decision-making
- **But we need to analyze implications of new capabilities on:**
  - Organizational roles and responsibilities
  - Policy
  - Noise and emissions regulations
  - Legal Challenges
- **In order to put in place mechanisms to facilitate fully using these capabilities**



# Potential Questions Raised by New Model Capabilities

- What are the relative impacts of climate vs. local air quality vs. noise?
- Each aircraft model has a different combination of noise, emissions, fuel burn and performance
  - What is the right balance? Will tomorrow's aircraft reflect this?
- What are the most economically-efficient strategies for achieving capacity growth and addressing environmental goals?
- Is there a benefit from leniency in one emission to gain stringency in another?
  - What is the health impact of PM vs. regulated emissions?
  - Should we relax CO stringency to gain stringency in NOX?
- Is a \$0.3B per year transfer of funds from air transportation system users to home owners around airports for sound insulation and purchase programs economically efficient?



# Agenda

Friday, December 8, 2006	
7:30-8:30am	<b>Continental Breakfast (Room 100)</b>
8:30am-10:15am	<b>Session Break-Outs</b> The workshop participants will meet briefly in break-out sessions on the following topics to discuss & develop questions to bring forward to the plenary <ul style="list-style-type: none"><li>• <b>EDS</b> (Room 100)</li><li>• <b>APMT</b> (Room 109)</li><li>• <b>AEDT</b> (Room 110)</li></ul>
10:15am-10:30am	<b>Break (Refreshments provided in Room 100)</b>
10:30am-12:00pm	<b>Plenary Feedback Discussion (Room 100), Mary Vigilante</b> <b>Closing Remarks, Carl Burleson/Wesley Harris</b>
12:00pm	<b>Conclusion of Workshop</b>



## Breakout groups questions

- Was prior workshop guidance generally addressed?
- What has been done right, and what can be improved?
- What are some potential frameworks that could be used to communicate results?



# Concluding Observations

- Environment is a key constraint on aviation's capacity to grow
  - We must continue to reduce environmental impact of aviation - a multidisciplinary approach is required
  - Decisions (and non-decisions) are made – need best possible analyses and quantitative estimates of uncertainty in a form useful to decision making
- We need to consider the organizational, regulatory, policy and legal implications of new models so that public policy does not lag modeling capabilities
- Stakes are high (potentially billions of \$s) – we as a community need to get this right

