



Quantifying Aviation Weather Forecast Benefits in a Common Model

INTRODUCTION

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Quantifying Aviation Weather Forecast Benefits in a Common Model

- ◆ Introduction

 - Bryce Ford, SpectraSensors, Inc. (5 min)

- ◆ U.S. Government Perspectives

 - Daniel Citrenbaum, FAA Operations Research Group (10 min)
 - Cynthia Abelman; Branch Chief, NWS Aviation Services Branch (10 min)
 - Yuri Gawdiak; Director, JPDO Interagency Portfolio & Systems Analysis Division (10 min)

- ◆ Airline Perspectives

 - Rick Curtis; Chief Meteorologist, Southwest Airlines (10 min)
 - Bill Watts; Flight Operations Consultant, Delta Air Lines (10 min)
 - Randy Baker; Senior Meteorologist, UPS Airlines (10 min)

- ◆ Identification of Issues and Champions

 - Bill Leber; Sr. Manager Business Development, Lockheed Martin (25 min)

Common Themes We've All Heard Over and Over

- ◆ “Better weather forecasts will lead to improved accuracy of flight planning, reduced fuel consumption and reduced emissions, all of which can produce significant cost savings.”
- ◆ “We benefit tremendously from the weather information we get. I don't know how we could operate if we didn't have the quality of forecasts we have now.”
- ◆ “The weather forecast saved us a ton of money for that snow storm.”
- ◆ “We sure would have done things differently if the forecast had seen this coming.”
- ◆ “It's good to see the CDM process working. It isn't perfect, but it sure is an improvement over everyone working independently.”

We Can All Agree On Several Things

- ◆ The Top Priority for Aviation Wx Support is Safety, and always will be!
- ◆ Improvements in Aviation Wx Support have contributed to this being the Safest Period in Aviation History
- ◆ Those improvements come from many sources
 - Better Scientific Knowledge Base
 - Better Observations
 - Better Forecasts
 - Better Information Systems
 - Better Collaboration and Partnership
 - Better Decision Making and Response
- ◆ Improvements in Aviation Wx Support are beneficial to almost all operations related to Aviation
- ◆ Continuous Measures and Metrics are a critical part of any Quality Improvement program

But How Much Benefit Is That Really?

- ◆ There are relatively few cases of well documented and quantified benefits from improvements in Aviation Wx Forecasting
- ◆ Most data comes from Government funded research that involves
 - Post Event Interviews
 - Lots of data collection
 - Extensive Analysis
 - Estimation of Benefits by 3rd party teams
- ◆ Most studies provide a static metric at a given time, and do not dynamically address changes in the Wx support infrastructure
- ◆ We do not routinely collect data on operational benefits in any Common way to support industry wide metrics on the benefits
- ◆ As a Result we have:
 - Relatively little compelling data that can be used Externally to justify Government expenditures in Federal/State/Local Wx infrastructure
 - Relatively little compelling data that can be used Internally to justify the expenditures on Corporate Wx infrastructures

Objectives of this Panel

- ◆ Provide a summary of some of the existing work in Quantifying Benefits
 - Government Perspectives
 - Aviation Industry Perspectives

- ◆ Initiate Industry Dialogue On
 - What data can be Regularly collected to Quantify the operational benefits
 - How often do we think we can collect metrics
 - What kind of Methodology should we use for regularly collecting data
 - How do we resolve the really contentious Issues
 - How do we minimize the cost involved in routinely collecting metrics
 - What info can we Share and what needs to be kept Private
 - How do we support data being Aggregated at higher levels
 - Can a single set of Common metrics really support Technical, Operational, Financial, and Political decision making