



Quantifying Monetary Impacts of Forecasts



National Weather Service Activities

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Quantifying Monetary Impacts of Forecasts NWS Activities



- Why?
- Recent Attempts
- Summary



Why?



- Government expending resources providing products/services
 - Regulatory reasons for NWS products
 - Ensure products/services are meeting NAS needs
- Many forces driving ever-limited resources
 - Focus areas for improvement
- Need factual/reliable data
 - Draw accurate conclusions



Recent Attempts – Case 1



- Additional meteorologists to Golden Triangle NWS Weather Forecast Offices in 2010
 - Weather-related delays decreased in each area 40-55% from previous years
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Or was it?

Many factors can account for reduction in delays from year to year...prime among them, the weather



Recent Attempts – Case 2



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 - GDP request based on CIWS/CoSPA forecasts
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 - NAM input to decision not to implement GDP
 - NTMO noted “GDP would have unnecessarily delayed numerous flights and drawn out the schedule”



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How do we know what would have happened?

- Simulated what would have been incurred by the system given a conservative GDP implementation (21z-00z):
 - 322 flights delayed – 232 actual flights delayed = 90 flight delays saved
 - 7565 minutes of delay – 5136 minutes actual delay = 2429 minutes saved
 - 23.5 average delay per aircraft (actual 22.2 minutes for all arrivals)
 - Assuming \$40 cost/minute of delay, this one instance of an avoided TMI would have saved roughly \$100,000



Summary



- Need to ensure limited resources focused on improvements that show return on investment
- Some simulations show promise in demonstrating benefit of improved products/services
- Need factual data to draw accurate conclusions