

NWS Vision for Aviation Weather

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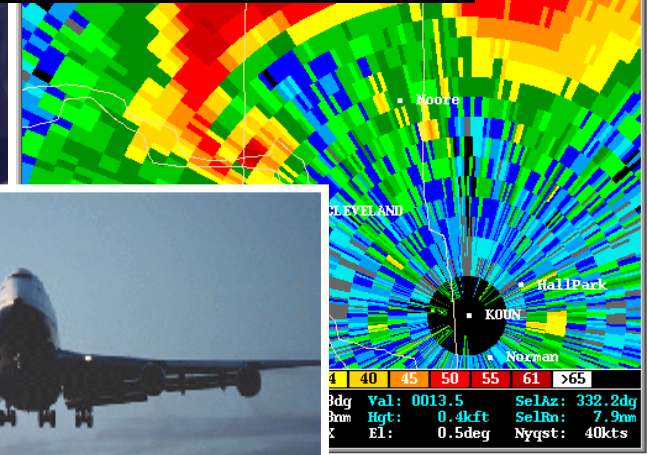
NWS Mission & Aviation Weather

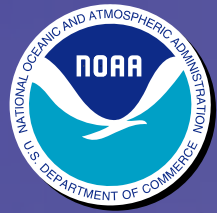


- Provide climate, water, weather forecasts and warnings to protect life and property and enhance the economy
- 76 billion observations
- 4 million aviation forecasts
- 94 thousand aviation warnings

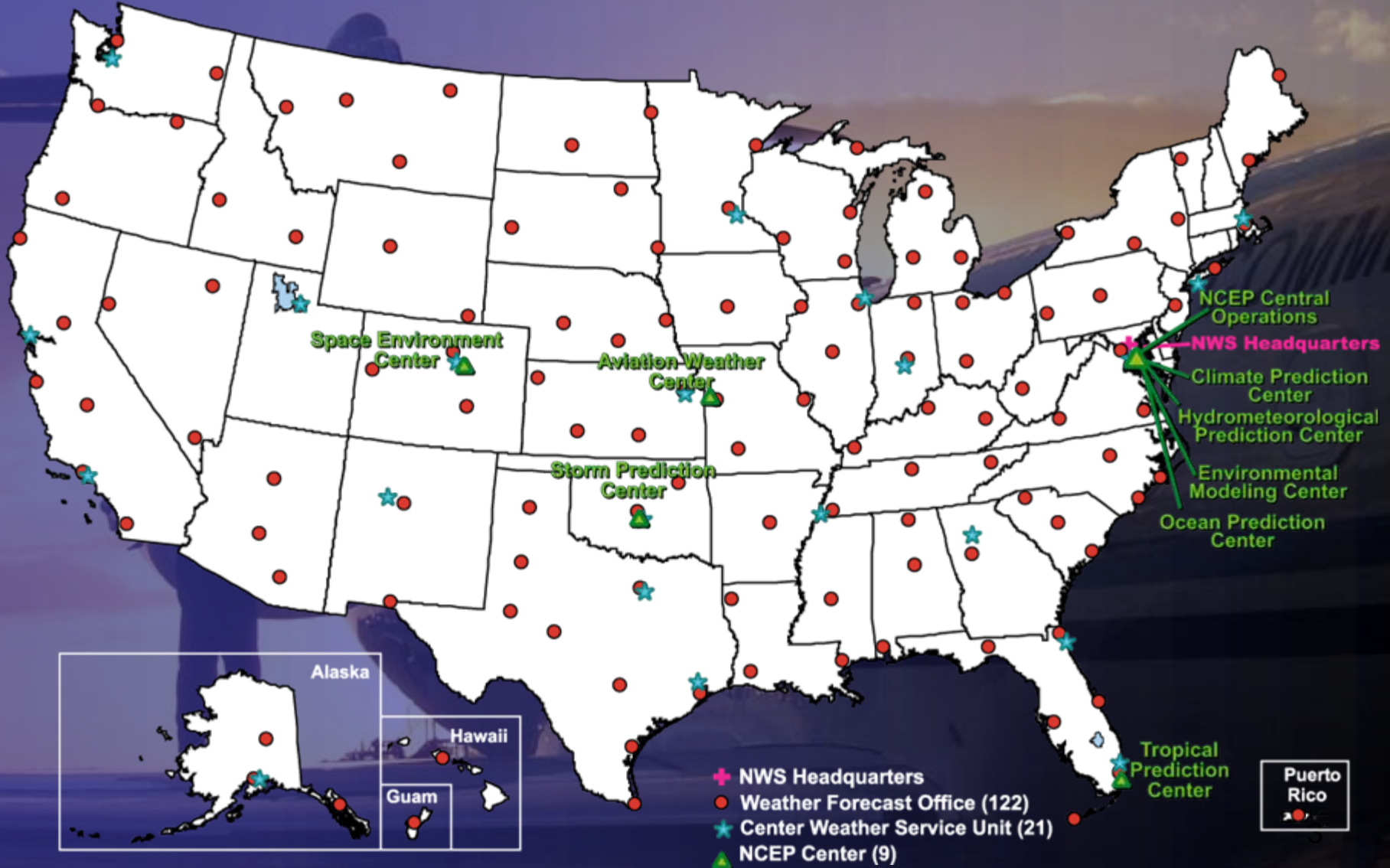
A Typical Year Brings:

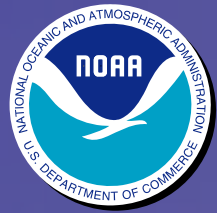
- 7 Hurricanes
- 1,000 Tornadoes
- 5,000 Floods
- 10,000 Violent Thunderstorms
- Drought Conditions
- 500 Deaths; 5,000 Injuries; \$14 Billion in Losses





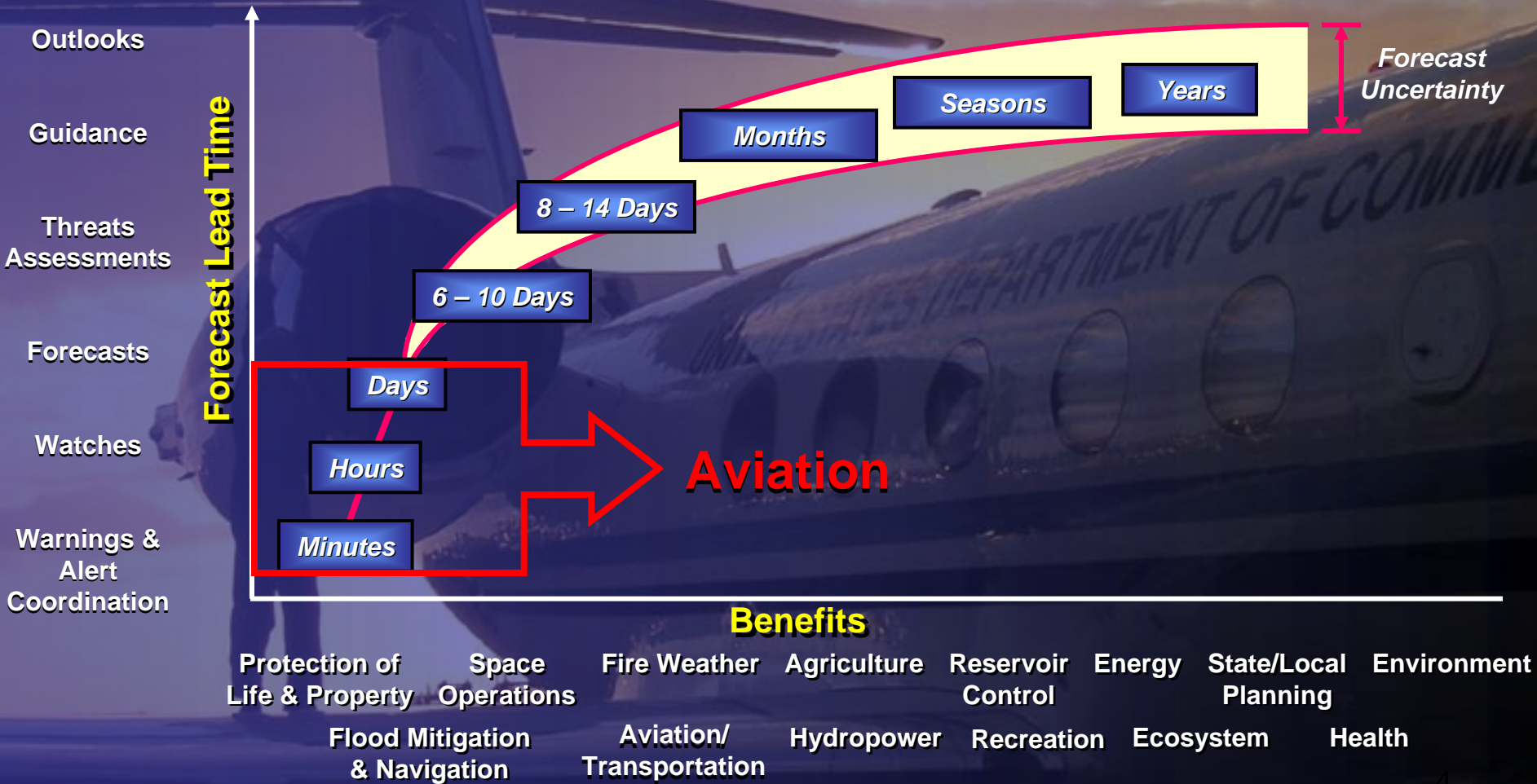
NWS Aviation Services Facilities





NWS Aviation Services

Seamless Suite of Products



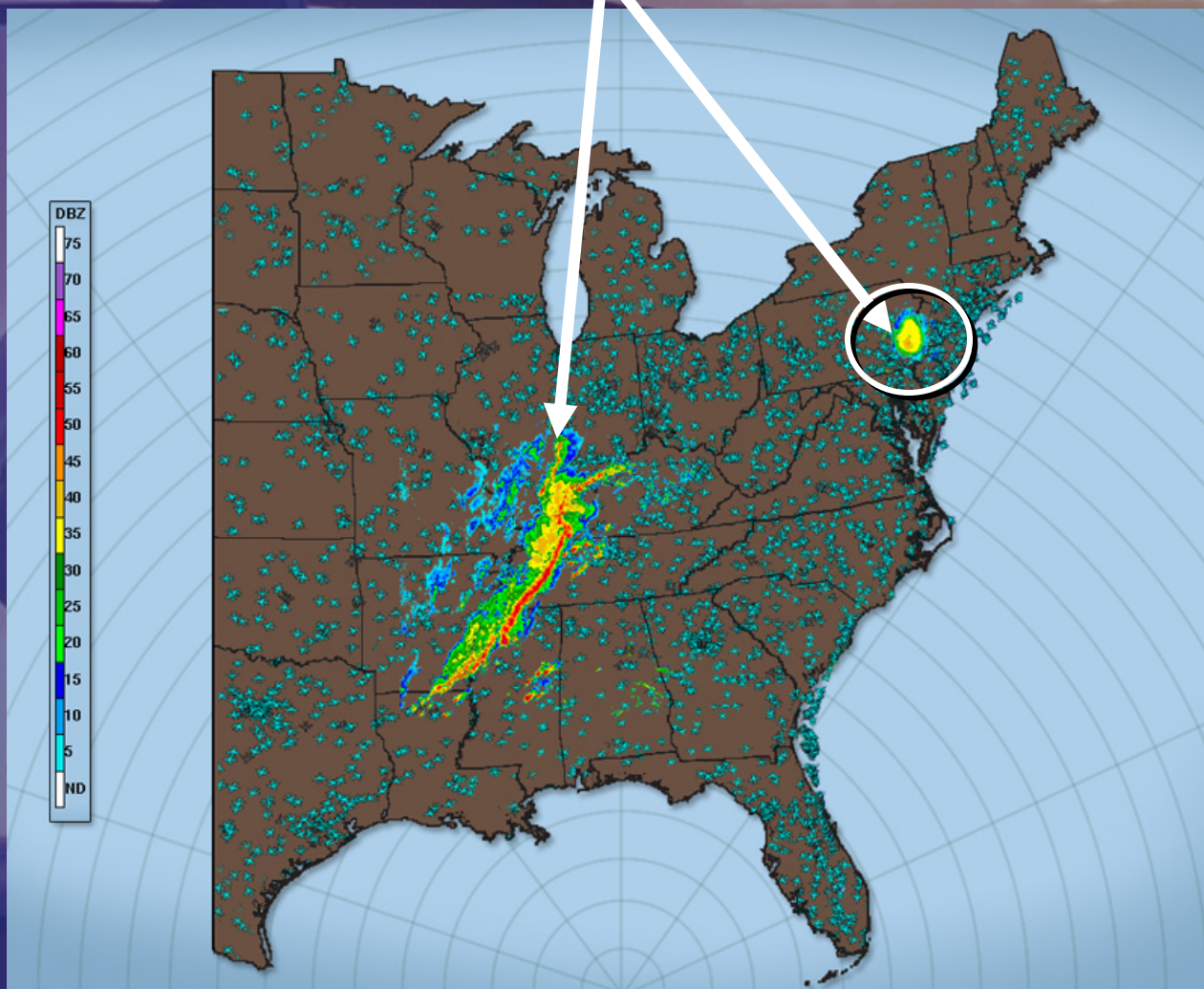


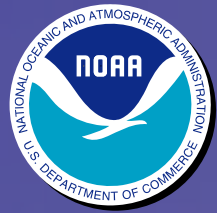
NWS Aviation Challenges

Weather & Traffic Density



Which weather system has greater impact on the NAS?





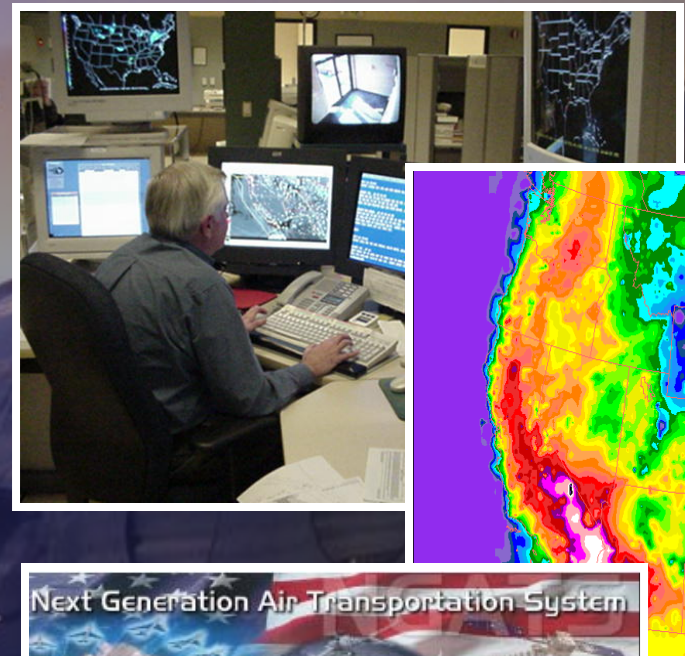
NWS Aviation Services

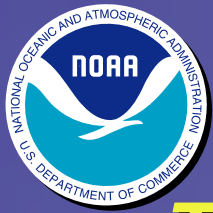
What We're Doing



Working to meet challenges

- *NWS aviation service improvements*
- *New and experimental products*
- *Next Generation Air Transportation System*





What We're Doing

Today's Aviation Service Improvements

Improved CWSU program

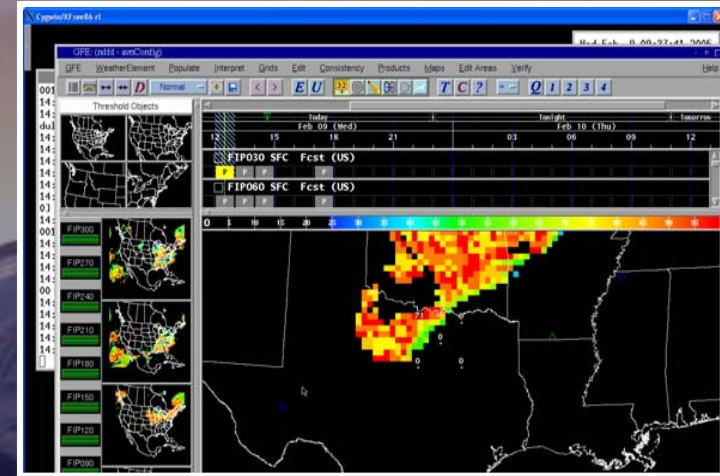
Better situational awareness

Weather Impacted Traffic Index

More accurate "real time" picture

New products

Tactical decision aids



Decision Aid Display connected to local host

Tactical Decision for Terminal TRACON OPS

KOKC forecast 0303/1223Z

	13Z	14Z	15Z	16Z	17Z	18Z	19Z	20Z	21Z
CIG	Red	Red	Blue	Blue	Blue	Green	Green	Green	Green
VSBY	Red	Red	Blue	Green	Green	Green	Green	Green	Green
WIND	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green	Green
TSTM	Green	Green	Green	Green	Green	Green	Green	Green	Green

Current TAF

```

KOKC 031223Z 031212 19004KT 1SM BR SCT008
TEMPO 1215 1/4SM FG VV001
FM1500 20005KT 4SM BR BKN010
FM1600 20006KT P6SM BKN020
FM1800 19010KT P6SM SCT030 SCT150
FM0000 16008KT P6SM SCT150
  
```

Legend

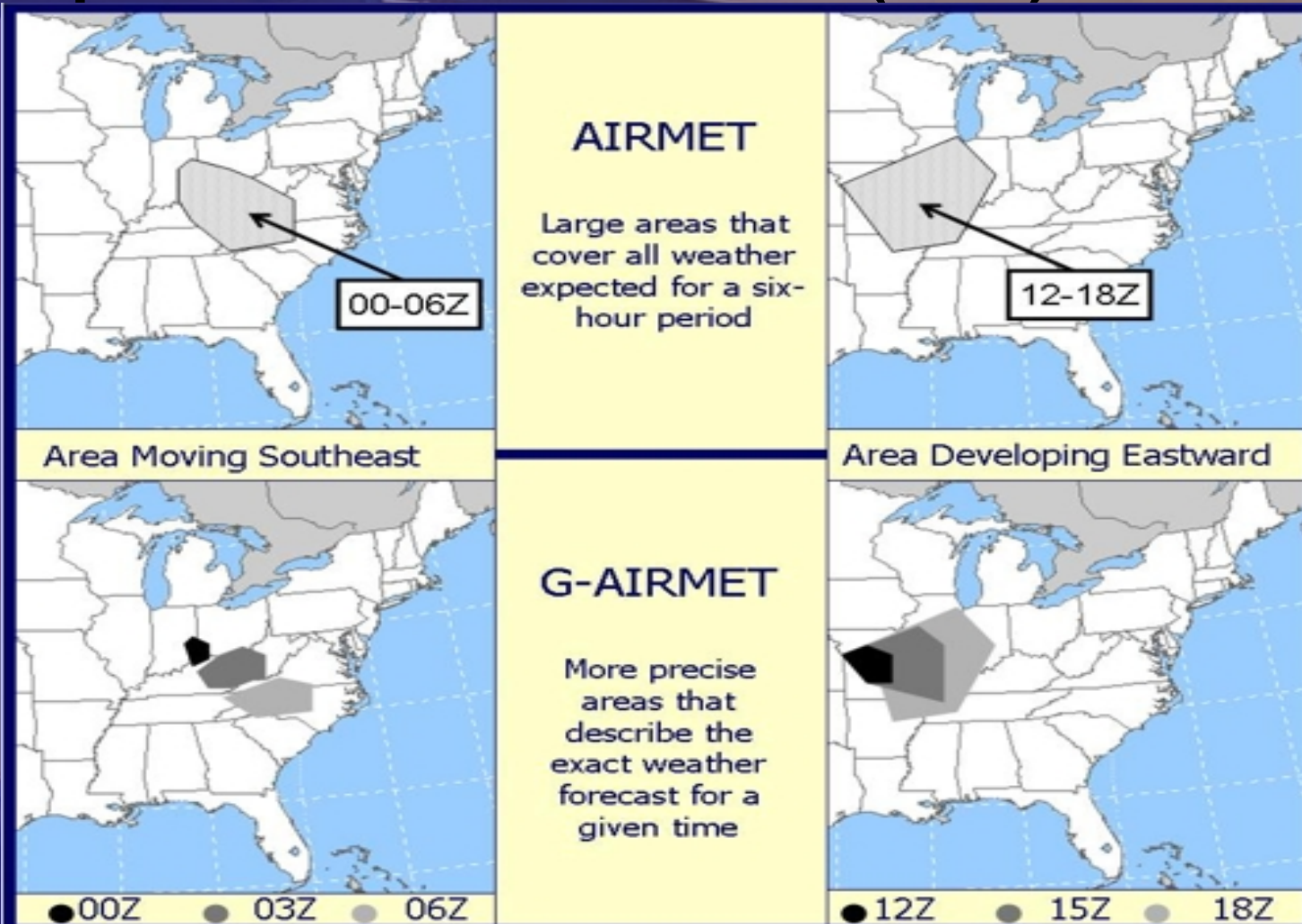
- CIG LIFR Red IFR Yellow MVFR Blue VFR Green
- VSBY LIFR Red IFR Yellow MVFR Blue VFR Green
- WIND X-wind Red Vrb1 Yellow North Blue South Green
- TSTM Prev Red Tempo Yellow Prob Blue None Green



What We're Doing *New Products*



Graphical Aviation Forecast (GFA)



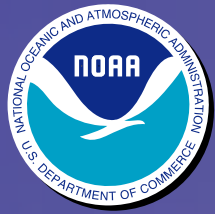


What We're Doing *Improving Observations*



- Adding water vapor sensors to MDCRS
- Integrating TAMDAR data
- Enhancing radar coverage
- Planning for future
 - *Networked observations integrated into common operational weather picture*
 - *Aircraft becoming nodes in a weather sensing network*





What We're Doing

NextGen: 4D & Digital Data

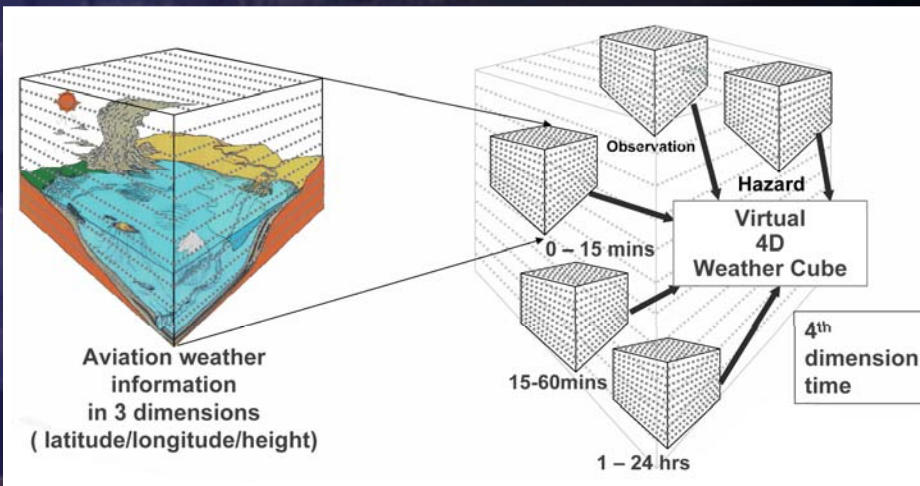


● Planning 4D Weather Cube

- ▣ *Meteorologist oversight*
- ▣ *Digital probabilistic forecasts*
- ▣ *Continuous updates*

● Adding elements to NDFD

● Collaboration via JPDO (DOD, FAA, NOAA)





What We're Doing

NextGen: Decision Support



- **Providing all NAS Managers and Users with common weather picture**
 - *Enabling better collaboration among user groups*
 - *Resulting in more consistent decisions*
- **Building confidence with more accurate and timely weather information**
 - *Enabling more effective utilization of available airspace*
 - *Causing fewer delays and re-routes*

**A Common Weather Picture will
Reduce the Amount of Airspace
Constrained by Adverse Weather**



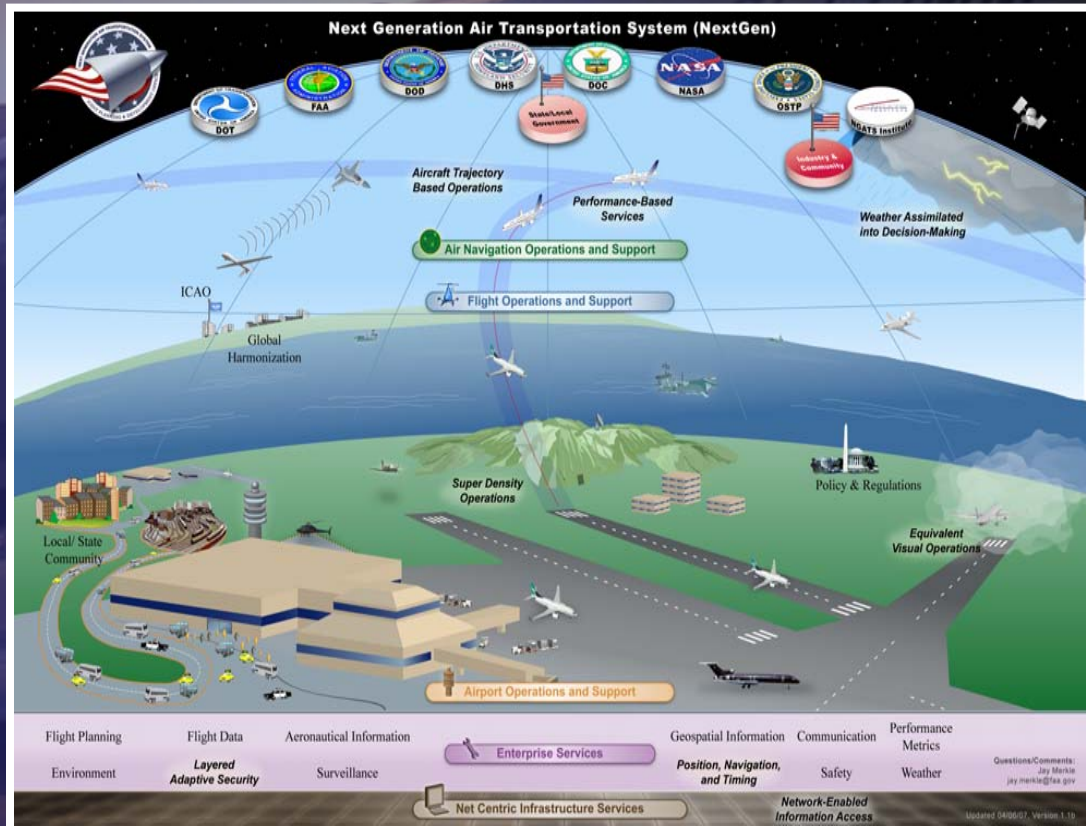
Our Commitment

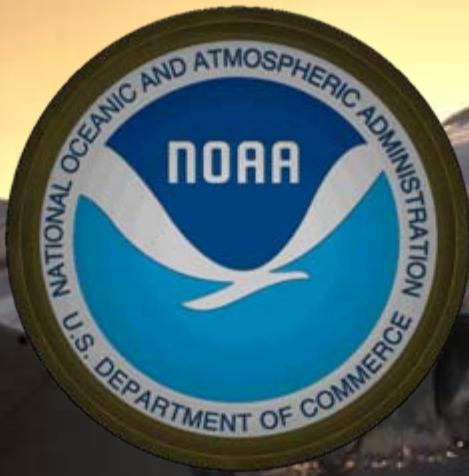
Aviation Weather Services



Provide accurate and timely aviation weather services for the safety and efficiency of NAS

- Improve observations and forecasts
- Promote common weather situational awareness
- Integrate weather information into decision making





DEPARTMENT OF COMMERCE