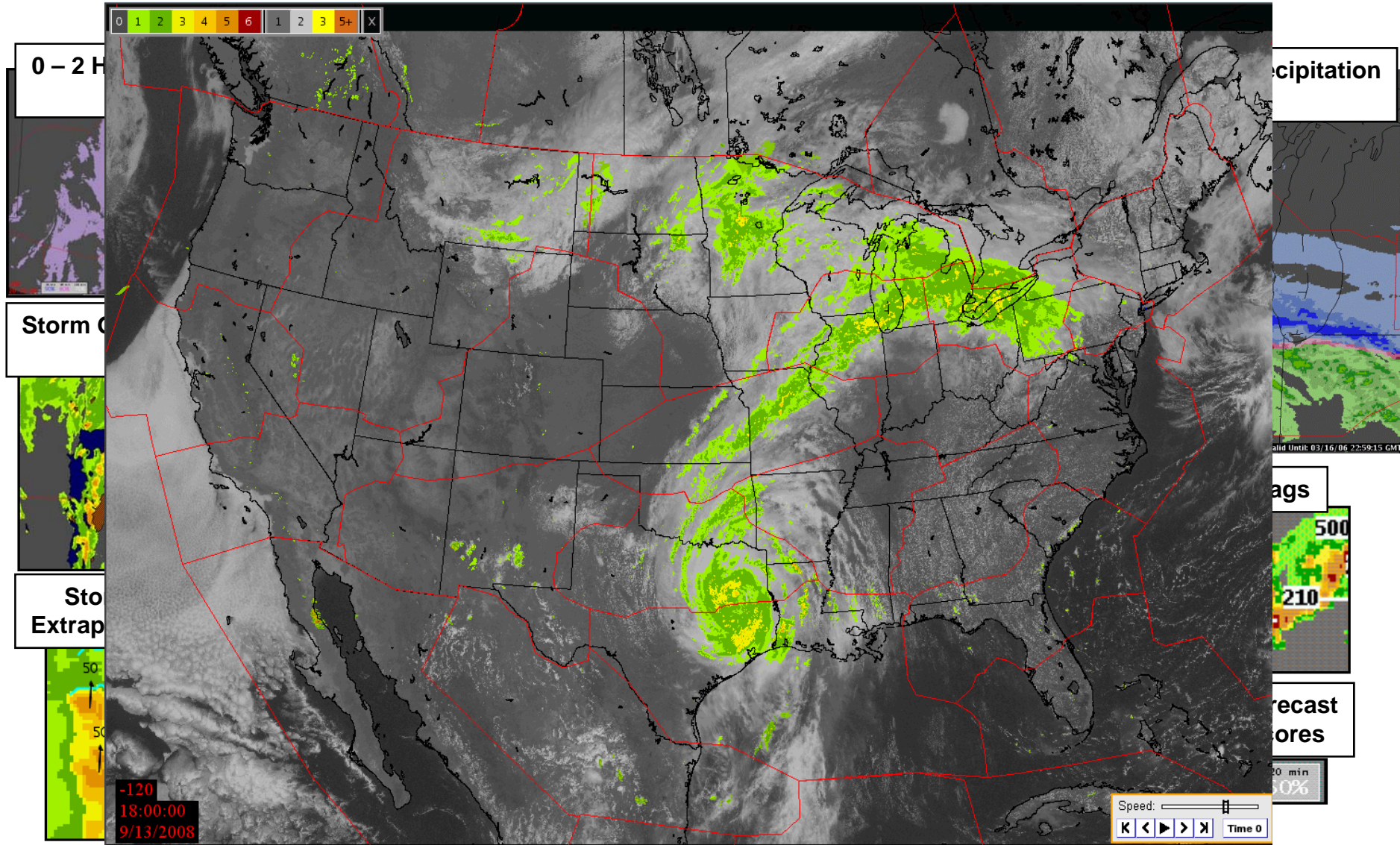




Corridor Integrated Weather System (CIWS)

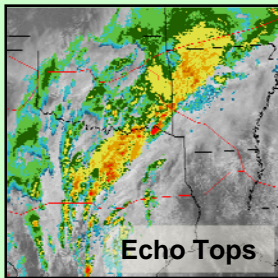
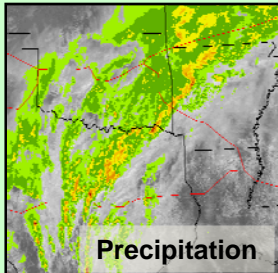




Framework for Integrated Weather-ATM Decision Making

4-D Weather Forecast

Tactical: 0-2 hrs
Strategic: 2-8 hrs

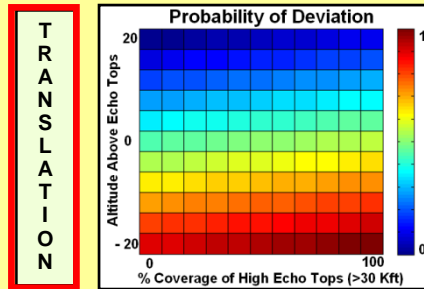


Forecasts of Precipitation, Echo Tops plus Turbulence, Shear, Growth, etc.
Includes Forecast Uncertainty

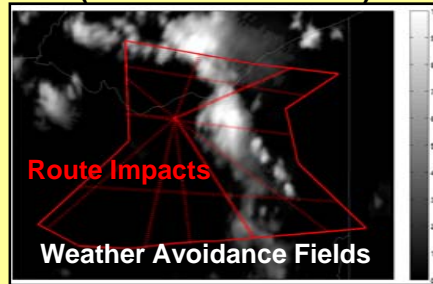
Wx – ATM Integration

Pilot Model

Pilot deviation likelihood as a function of weather

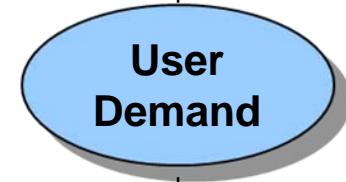
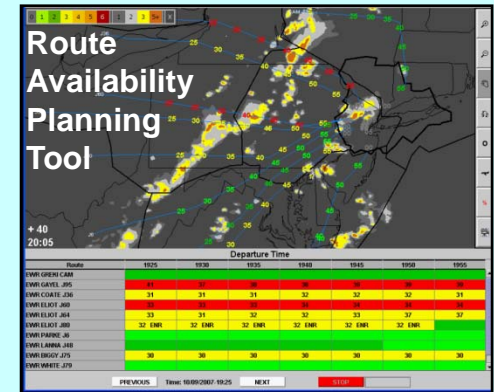


Capacity Impact Forecasts (Terminal and Enroute)



Flow Impacts / Sector Capacity Loss

Effective Response Strategies

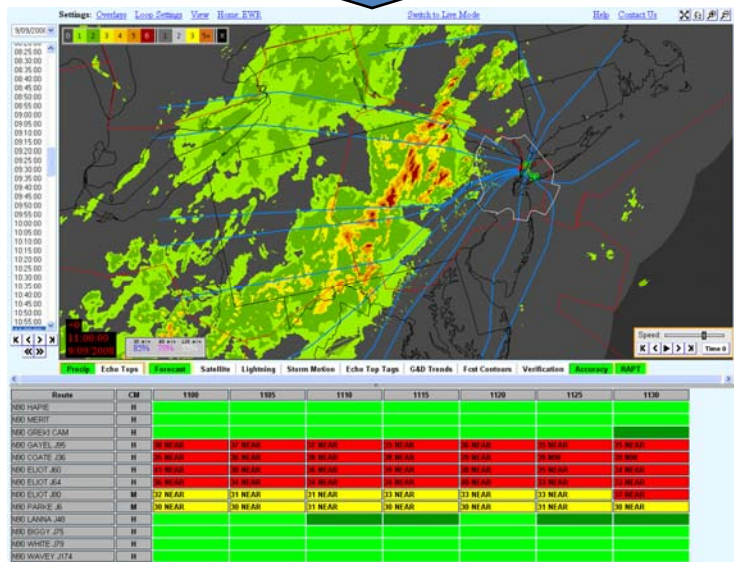
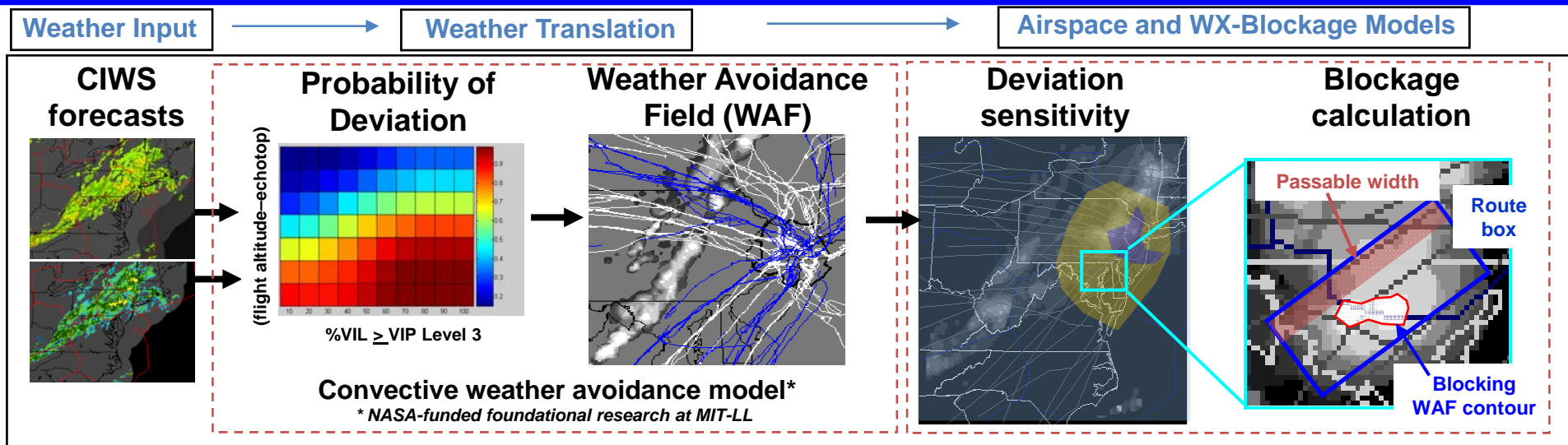


Air Traffic Management Decision Making and Execution

Develop and decide on air traffic management plan
Execute plan
Real-time evaluation and decision review



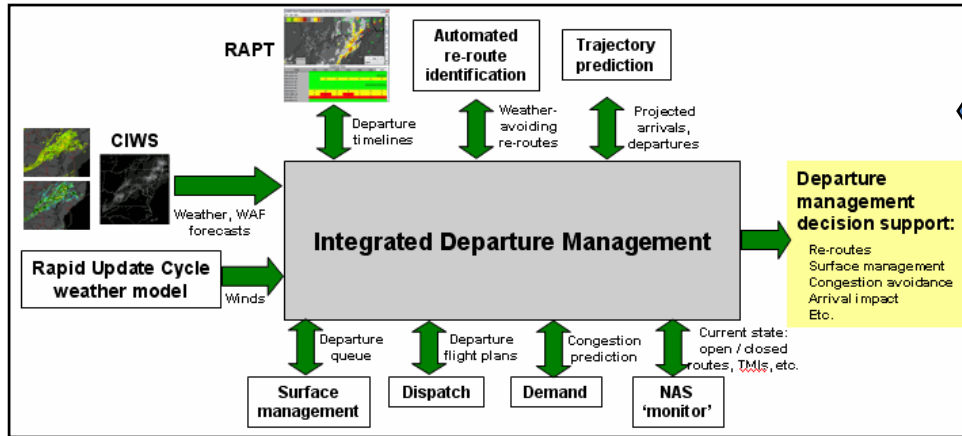
NY Route Availability Planning Tool (RAPT)



- **Estimated 2007 RAPT Delay Savings: 2,300 hours, \$7.5 M**
 - Early 2008 field study results show increased benefits
- **Lessons learned from real-time field use assessment:**
 1. Don't expect to get it right the first time – best to design WX-ATM DST with this in mind
 2. Close collaboration with operational user community is critical (in case of RAPT – includes FAA and airlines)
 3. Aggressive training program crucial to DST acceptance and success



Building a Scalable Network of WX-ATM Response Strategies



“Building block” approach to expand response strategy capabilities in a specific ATM decision-making arena (e.g., departure management)

Extending framework for integrated WX-ATM decision-making from tactical to strategic wx-impact mitigation Planning (e.g., AFP management)

