

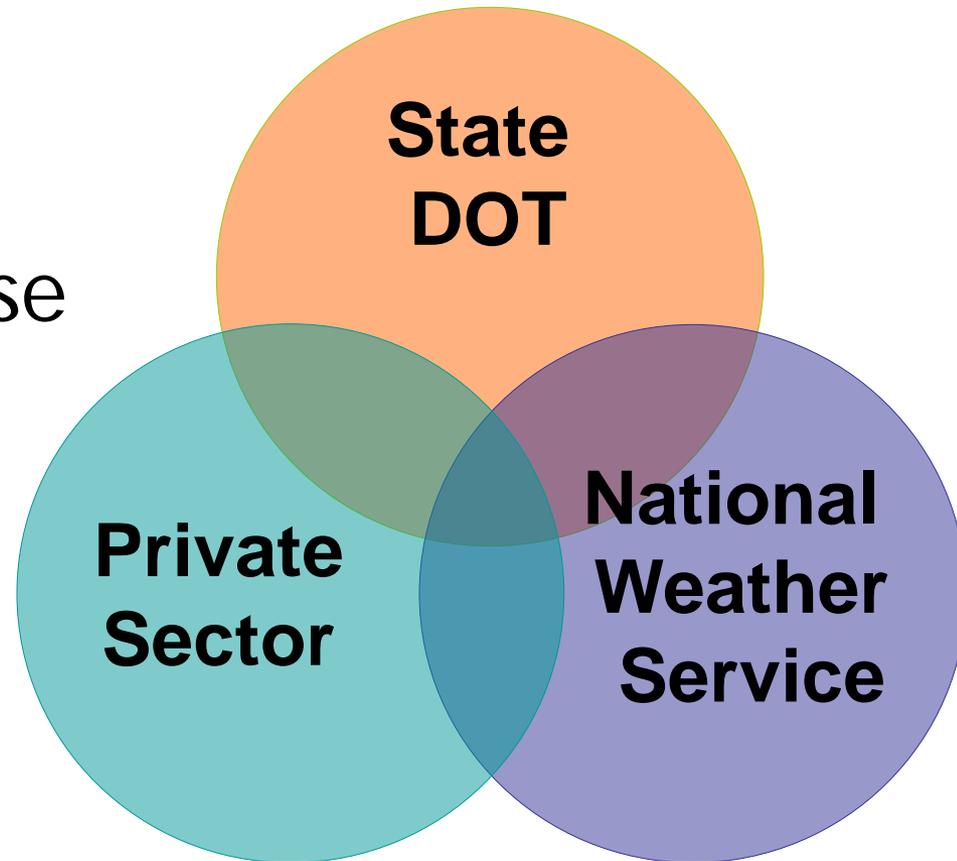
Joint Project with the Weather Enterprise and FHWA-RWM

Guidance for Improving Collaboration Between State DOT's and the Weather Enterprise



Who are the players?

- State DOTs
- Operational Weather Enterprise
 - Public Sector
 - Private Sector
- Partners
 - Emergency Managers
 - Academics



Project Description and Goals

- Evaluate Current Practices of State DOTs' Interactions and Relationships with the Weather Enterprise
 - E.g. sharing data; developing forecasts; issuing messages and graphics; education
- Document These Interactions
- Provide State DOTs With a Guidance Document Including:
 - Differing Methods of Operations
 - Criteria and Summary of Good Practices



The Goal(s)

- Societal Benefit
 - Public, local governments, commercial sector make good decisions about transportation based on accurate, timely, and understandable weather information and its impact on transportation
 - DOTs accomplish their mission in the most cost effective way possible by incorporating weather information into their decision making process



How?

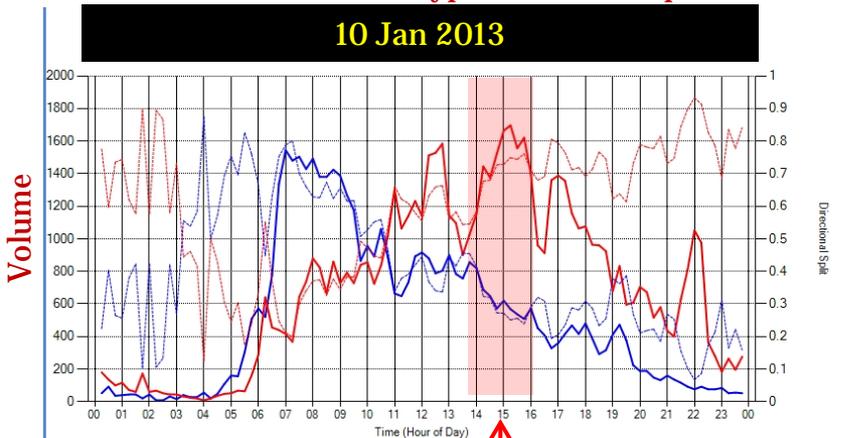
- Collaboration on the Weather
 - Has to happen as a prerequisite to getting the messaging done right
- Collaboration on the message
 - People need to hear and see a **consistent message from all players** or they don't modify their behavior
- Collaboration toward the action
 - The message is not just weather, its about impacts to **transportation and risk-informed decisions**
- Successful collaboration means:
 - Optimization of the relationship to be more efficient, eliminate duplication, accelerate understanding, enhance consistency, all to better support shared goals such as **life, safety and economic outcomes** as illustrated in the next slide...



Impact of a Shared Message?



Typical commute peak



Early commute peak

- Major commuter route near University of Utah shows impact of messaging
- Afternoon peak commute (southbound) time was shifted based on forecast
 - Typical peak is 400-600 PM
 - On January 10th peak was 300-400 PM
- Reduced afternoon and evening (Noon-800 PM) travel based on forecast
 - 17 Jan - Total Volume 17,871
 - 10 Jan - Total Volume 13,540



— Southbound — Northbound



Identified 5 Case Studies With Disparate Operations

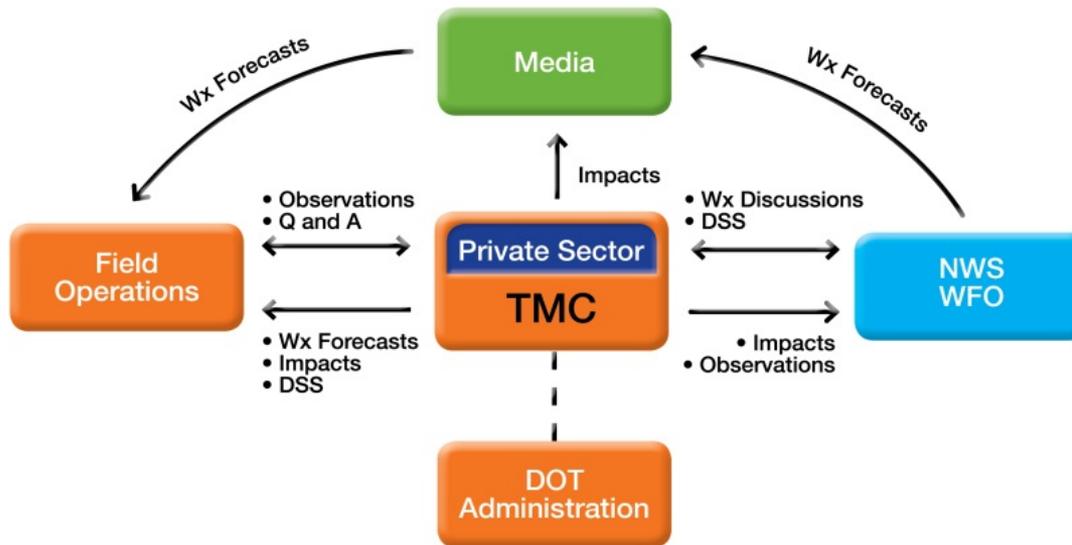
- Case 1: Private Sector in the TMC
- Case 2: Private Sector outside the TMC
- Case 3: No Private Sector
- Case 4(a): Private Sector Met and DOT Met
- Case 4(b): Private Sector Met and DOT Met embedded in the TMC



Case 1

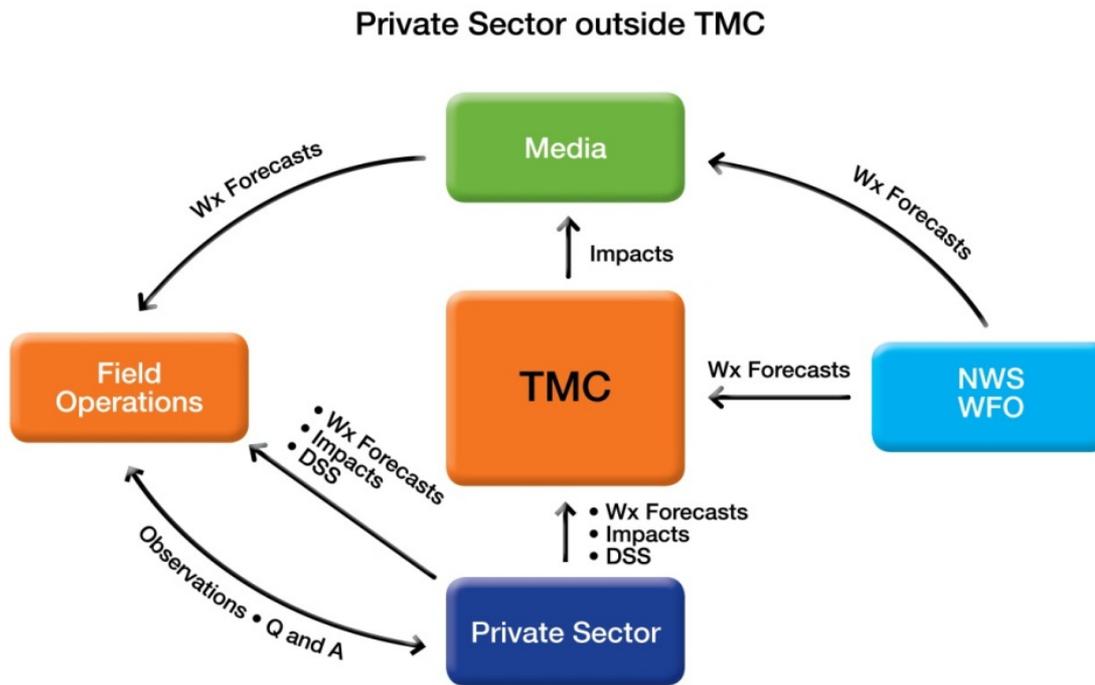
Private Sector in the TMC

Private Sector Embedded in TMC



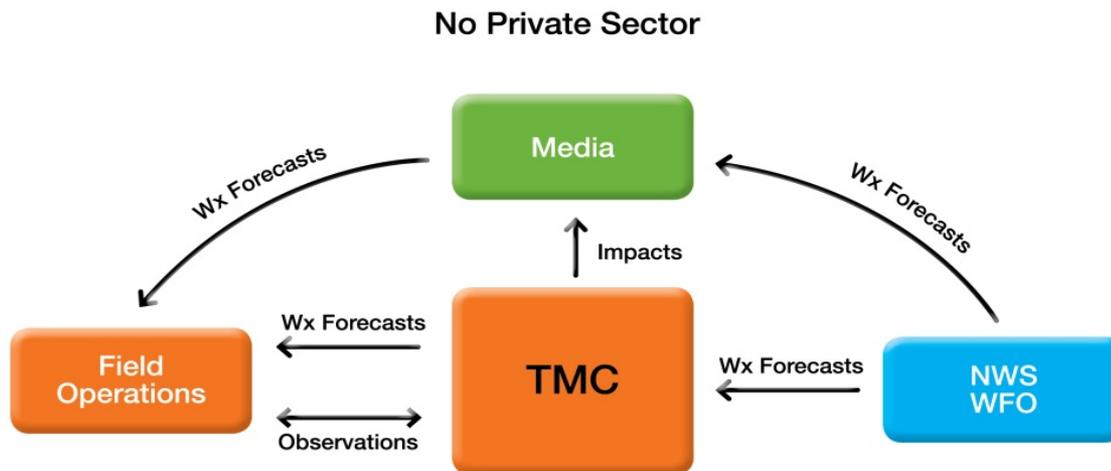
Case 2

Private Sector outside the TMC



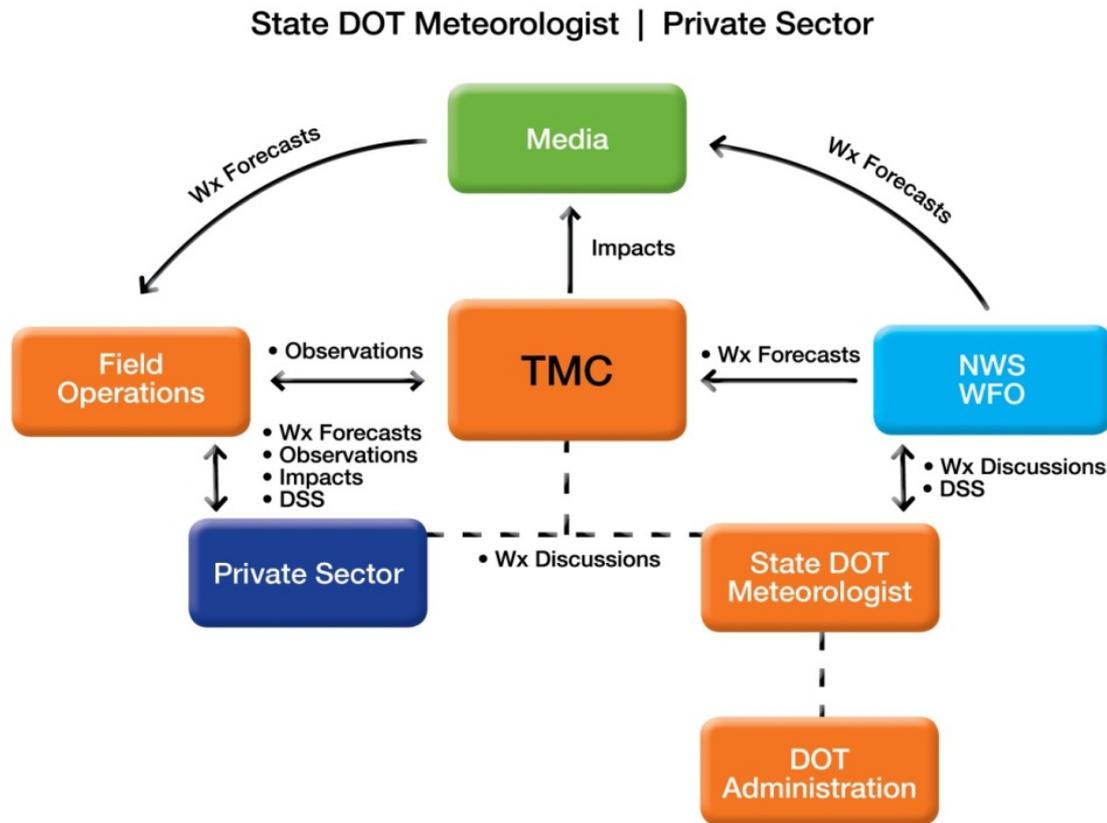
Case 3

No Private Sector



Case 4(a)

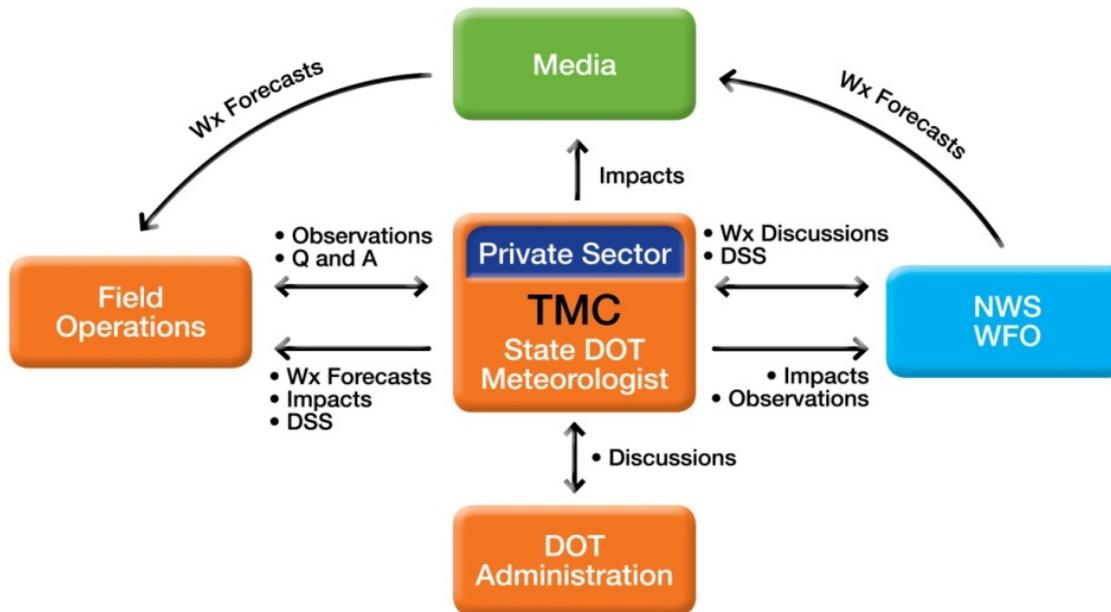
Private Sector Met and DOT Met (neither embedded)



Case 4(b)

Private Sector Met and DOT Met Embedded in the TMC

State DOT Meteorologist and Private Sector Embedded in the TMC



Develop Documentation Framework For DOT Weather Enterprise Interactions

Phase I

- Organization/Structure
- Methods of Interactions
- Weather Data Sources
- Relationships

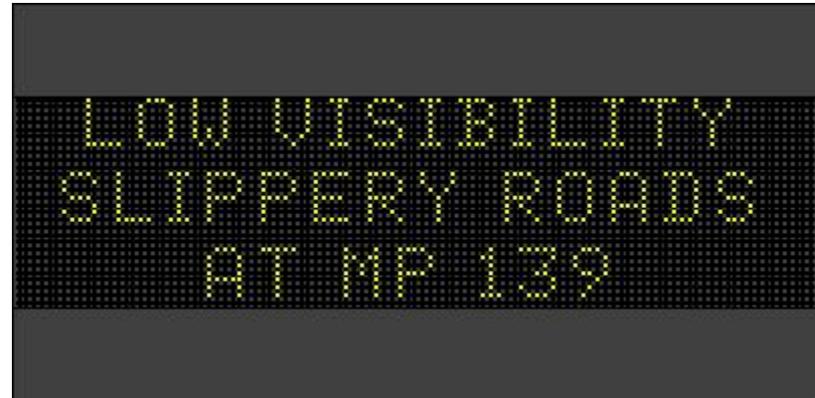
Phase II

- Specific Weather Event(s)
- Impact mitigation strategies
- Decision Support Systems (DSS)
- Public messaging
- Performance Evaluation

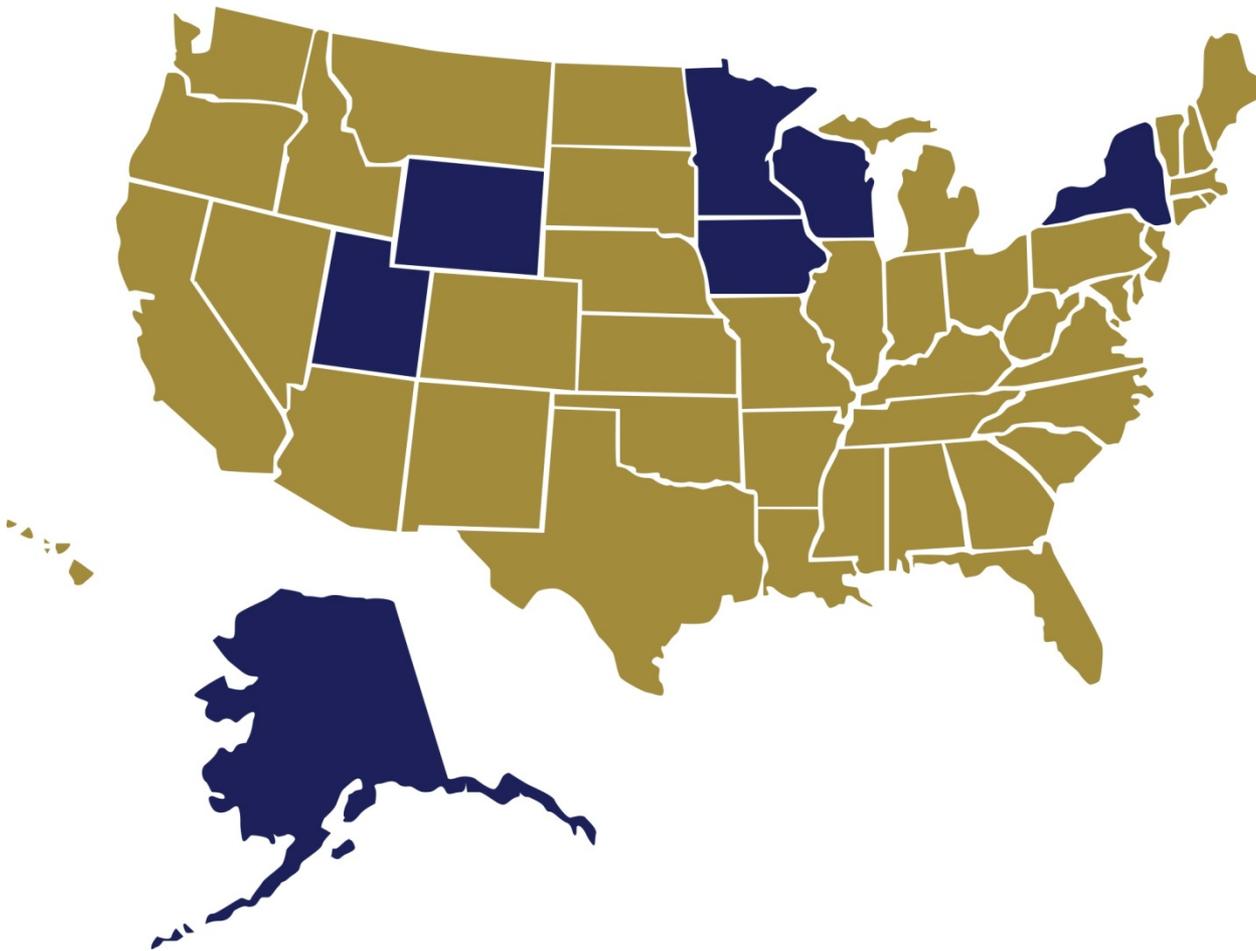


What Does Success Look Like

- Clearly Defined Alignment Among the Weather Enterprise
- Coordination of Decision Support Services
- Consistent Traveler Information Messaging
- An Engaged and Communicative Weather Enterprise



States Interested Phase I



State's Experience

- Weather Operations organization and structure
- Methods of interactions and shared information with the Weather Enterprise
- Highlights of what works and lessons learned



State's Experience

- Alaska DOT&PF Jack Stickel
- Iowa DOT Tina Greenfield
- Wyoming DOT Kevin Cox
- NWS WFO Little Rock John Robinson
- Wisconsin DOT Mike Adams
- Utah DOT Jeff Williams
- Minnesota DOT Curt Pape



Questions/Open Discussion



Further Discussion Topics

1. Expectations
2. Justifications
3. Program's Strengths and Weaknesses
4. Barriers to Success in Achieving a Mature Weather Ops Program
5. Future Needs For Road Weather Support

