

Performance Measures and Training for RWM

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**Road Weather Management
Stakeholder Meeting**

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RWM Performance Measurement

1. Program Level - Road Weather Management (RWMP)
2. Office Level - Transportation Operations
3. Agency Level - Federal-Aid Highway Program

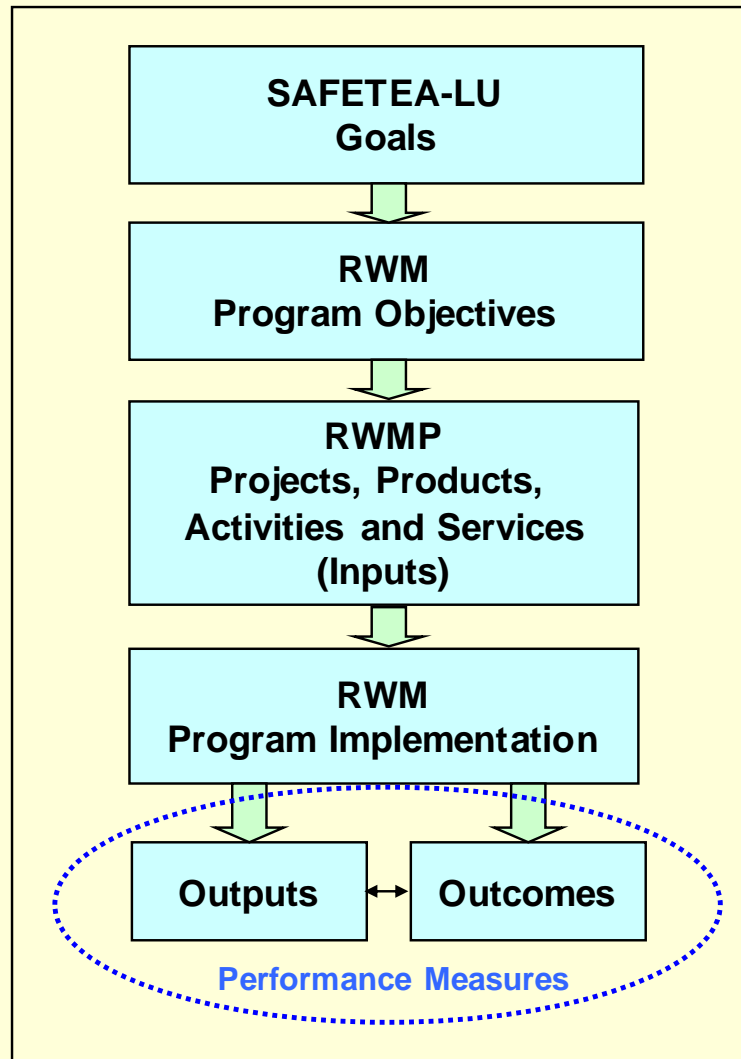


RWMP Performance Goals

1. Maximize use of available road weather information and technologies
2. Expand Road Weather R&D efforts to enhance roadway safety, capacity, and efficiency while minimizing environmental impacts; and
3. Promote technology transfer of effective road weather scientific and technological advances.



Performance Measurement Process



Relevant Activities and Products

- *Clarus* Initiative
- Maintenance Decision Support System (MDSS)
- Weather Responsive Traffic Management
- Connected Vehicles Weather Research
- Stakeholder Coordination/Partnership
- Training and Education



Progress to Date

PHASE 1 - Identify measures (completed 2008)

- 11 output and outcome measures
- 16 performance indicators

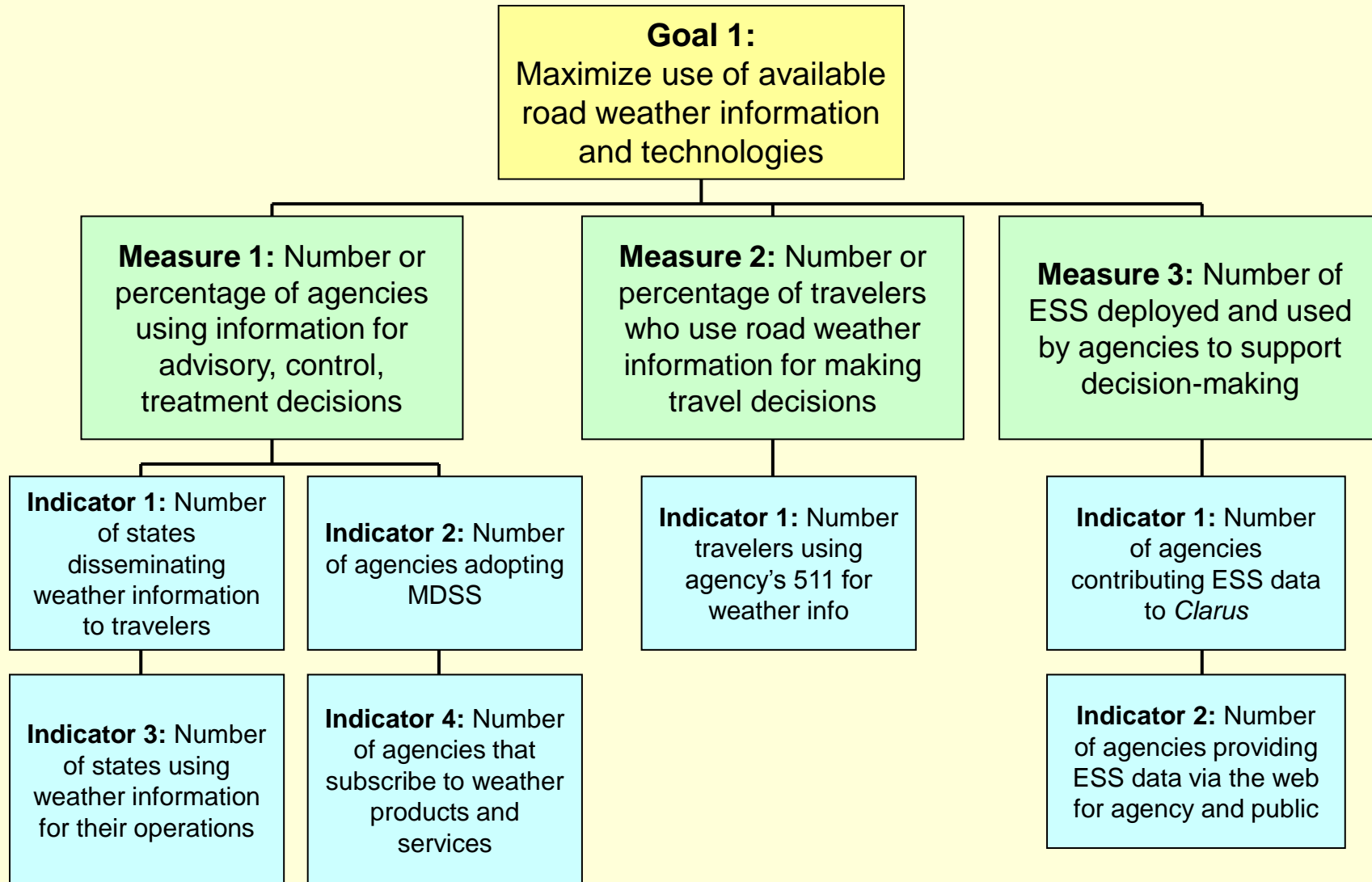
PHASE 2 - Quantify the measures (completed 2010)

- Compiled available data on measures
- Conducted interviews with States
- Published final report, flyer

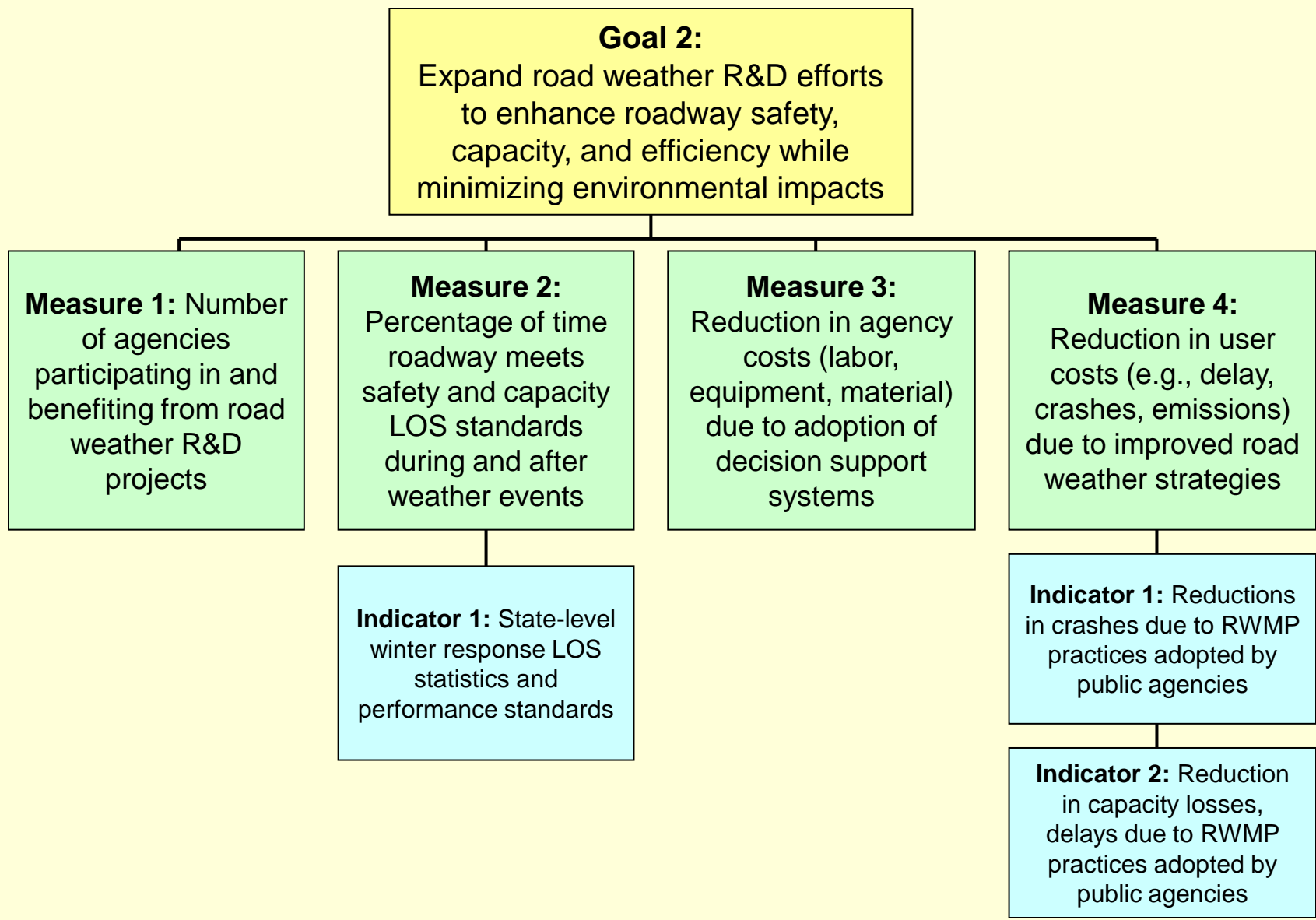
PHASE 3 - Update the measures and identify gaps (to be initiated in 2011)



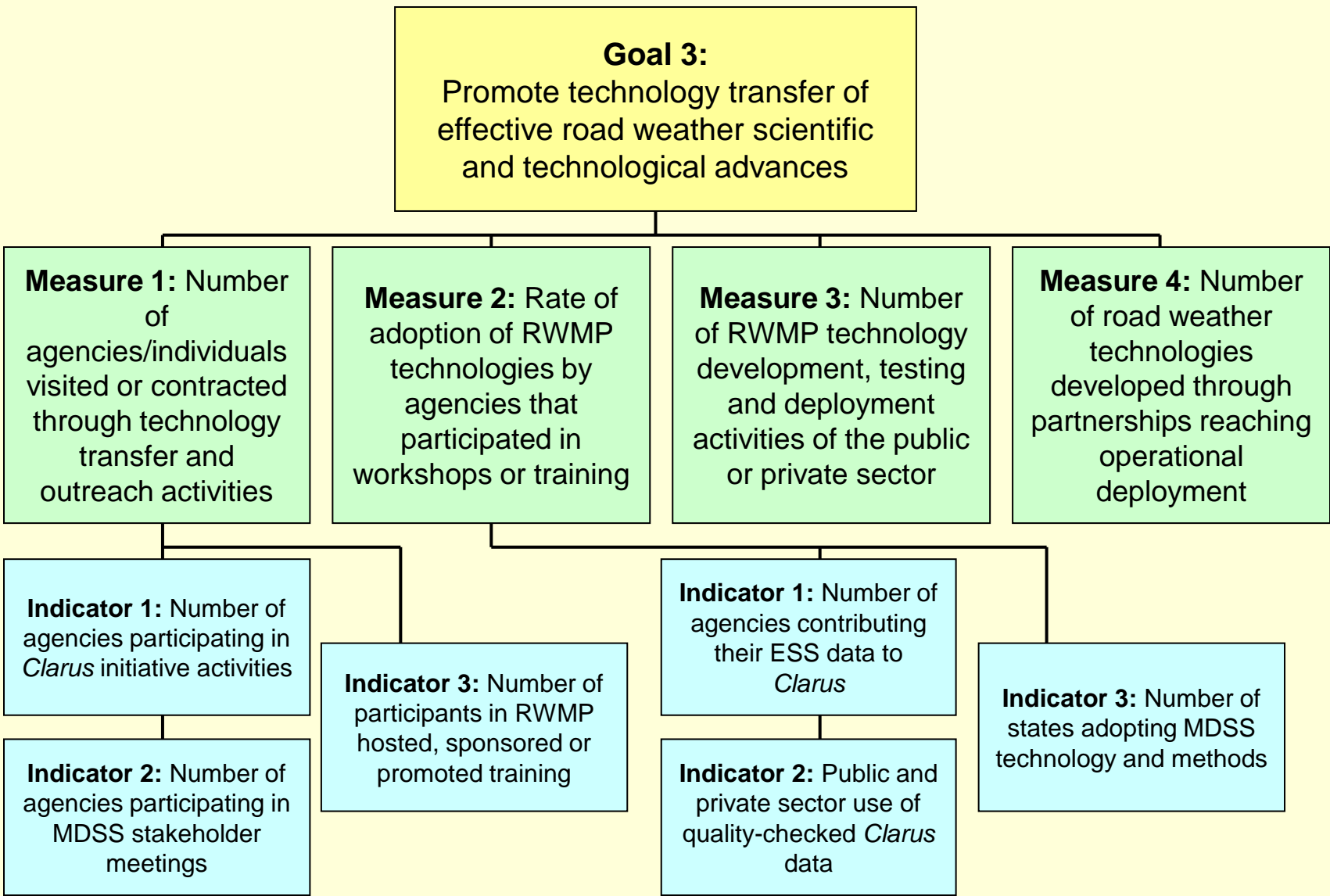
Goal 1 Measures & Indicators



Goal 2 Measures and Indicators



Goal 3 Measures and Indicators



Transportation Operations Efficiency Index (OEI)

- Composite index that reflects the level at which the 40 largest metropolitan areas are deploying proactive transportation management and operations strategies.
- Replaces the old Congestion Reduction Efficiency Index (more about Traffic Incident Management)
- Broader look at Operations strategies FHWA is promoting



Operations Efficiency Index (OEI) Measures

1. Have regional traffic signal operations programs
2. Have one or more active congestion pricing projects
3. Have an established bottleneck relief program
4. Deploy road weather management strategies
5. Deploy traffic incident management strategies
6. Deploy work zone management strategies to improve work zone operations
7. Display travel times on variable message signs (VMS)



Road Weather Management OEI Criteria

1. Do they provide current and forecast weather and road conditions on 511/HAR, public websites and message signs?
2. Are they implementing traffic control in response to weather events (e.g., VSL, ramp meter, signal timing) and integrating weather information in their TMC?
3. Do they use weather-based decision support systems to determine timing and amount of staffing and treatment during snow/ice events, or to schedule non-winter maintenance activities based on weather?



RWM OEI Measures

	MATURE (Rating = 1.0)	IN PROCESS/MEDIUM (Rating = 0.66)	LOW (Rating = 0.33)	NONE (Rating = 0)
ADVISORY INFORMATION	All of "Medium" plus contract with a value-added weather service provider to include forecasted info. Info is disseminated via all 3 strategies.	Weather and/or road conditions provided based on visuals (e.g., cameras) or internal inputs (e.g., CARS). Information is disseminated using at least 2 of the 3 strategies (511/HAR, website, or message sign).	Weather (not road weather) information is provided, and one advisory strategy is used (511/HAR, website, or message sign)	No weather information provided
TRAFFIC CONTROL	Fully implementing multiple weather-responsive control strategies. Integrated weather information in TMC operations.	Implementing or in the process of implementing multiple control strategies. In the process of integrating weather information into their TMC.	Implement at least one weather-responsive traffic control strategy (e.g. VSL, ramp meter, signal timing)	No weather-responsive traffic control being implemented
MAINTENANCE DECISION-SUPPORT	Deploying tailored, weather-based DSS (e.g., recommended actions as in MDSS) to make maintenance decisions.	Exploring the use of tailored, weather-based decision support systems (e.g., recommended actions as in MDSS) to make maintenance decisions.	Using minimal/non-tailored weather information to make maintenance decisions.	No weather-based decision support system used



Top 12 Metro Areas (4th Qtr, 2010)

METRO AREA	Advisory	Traffic Control	Maintenance Decision-Support	Composite OEI
Houston	1	1	1	1.00
Chicago	0.66	1	1	0.89
Phoenix	1	0.66	1	0.89
St. Louis	1	0.33	1	0.78
Virginia Beach	1	1	0.33	0.78
Philadelphia	1	0.66	0.66	0.77
Seattle	1	0.66	0.66	0.77
Minneapolis-St. Paul	1	0.66	0.66	0.77
Denver	0.66	0.66	1	0.77
Kansas City	1	0.66	0.66	0.77
Nashville	1	0.33	0.66	0.66
AVE. FOR 40 AREAS	0.7	0.44	0.46	0.53

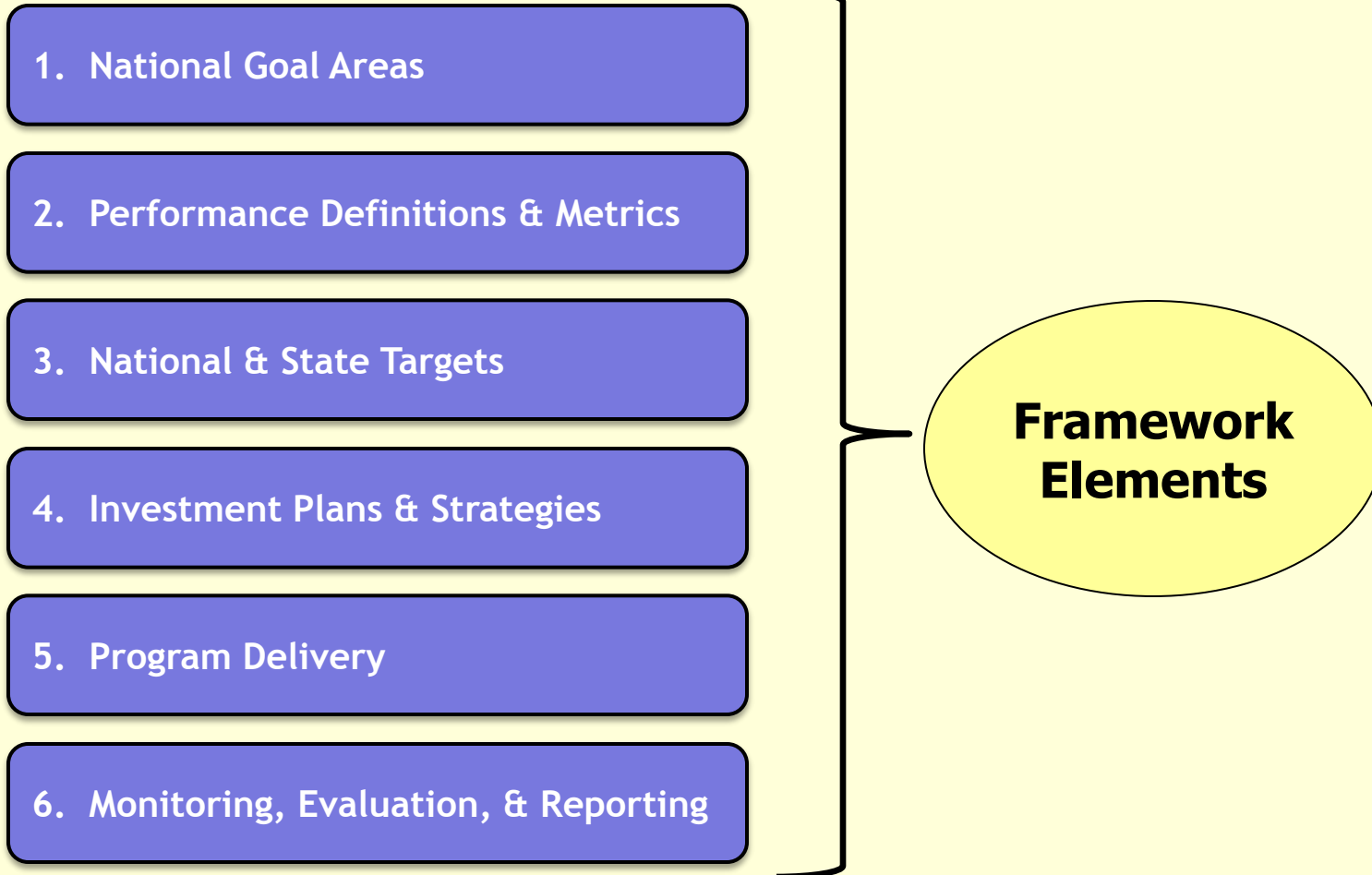


FHWA FY12 Budget: Outlines Performance Management Process

- Secretary, with input, establishes quantifiable performance measures and national performance goals
- States work in partnership with FHWA to set state targets
- Envisions planning process as vehicle to implement performance management
- Calls on States to report annually on progress in meeting targets
- Provides additional flexibility when targets are met
- Requires performance improvement plan when targets not met



FHWA-Wide Performance Management Framework



National Performance Goal Areas

- Safety
- Pavement and bridge condition
- Reliability
- Freight/economic competitiveness
- Environment/climate change
- Livability



Training for RWM

- Principles & Tools for Road Weather Management (NHI/CITE)
- RWIS Equipment and Operations (CITE)
- Weather-responsive Traffic Management (under development)
- Weather & Road Management (COMET)
- User Needs to Mitigate Societal Impacts: Road Weather (NWS)

