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STRATEGIC HIGHWAY RESEARCH PROGRAM

Accelerating solutions for highway safety, renewal, reliability, and capacity

Regional Operations Forum
How to Organize for Operations

"Organization"

What are we talking about?

- Organize *Internally* for effective conduct of TSM&O mission
  - ✓ Functions, roles and reporting
  - ✓ responsibilities, authority and accountability
  - ✓ "dotted line" relationships

- *External* relationships formalized for effective collaboration

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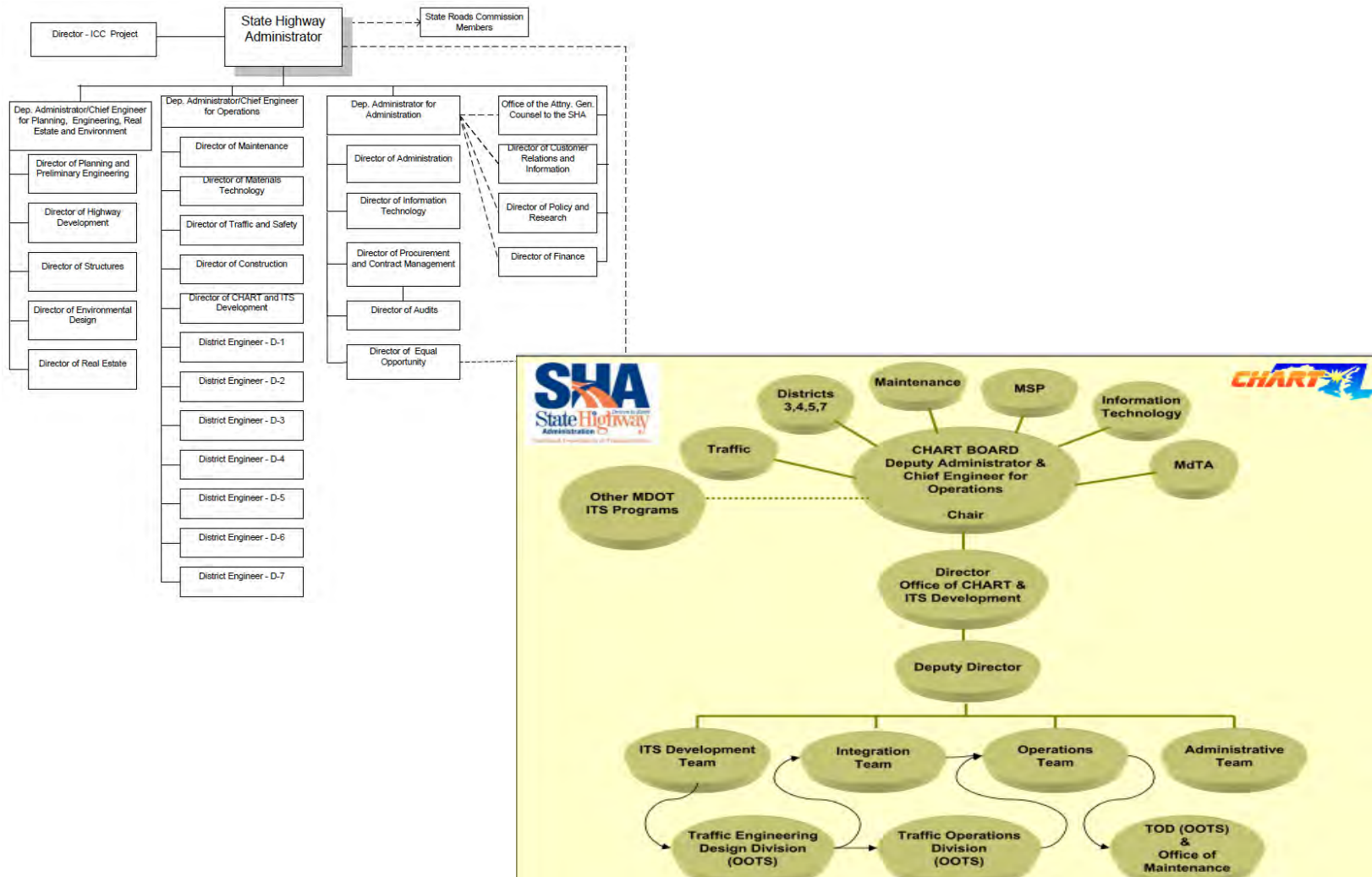*OF THE NATIONAL ACADEMIES*

What Needs to be "Organized?"

- Span of control - align responsibility with authority

- Span of influence - Relationship/leverage over support functions

- Hierarchy – manager in position to make trade-offs regarding performance

- Ways to coordinate key business process functions

  - Real-time procedures and protocols

- Decentralization - HQ vs. districts roles -- need for "matrix reporting"

- Is TSMO truly a "program"? How to tell?

  – Discussion item

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Question: How Important is Organization Structure?

- Group Discussion

  (Hint: roles, responsibilities, authority, accountability, reporting, relationships)

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Two extremely different org charts (first)

Two extremely different org charts (second)
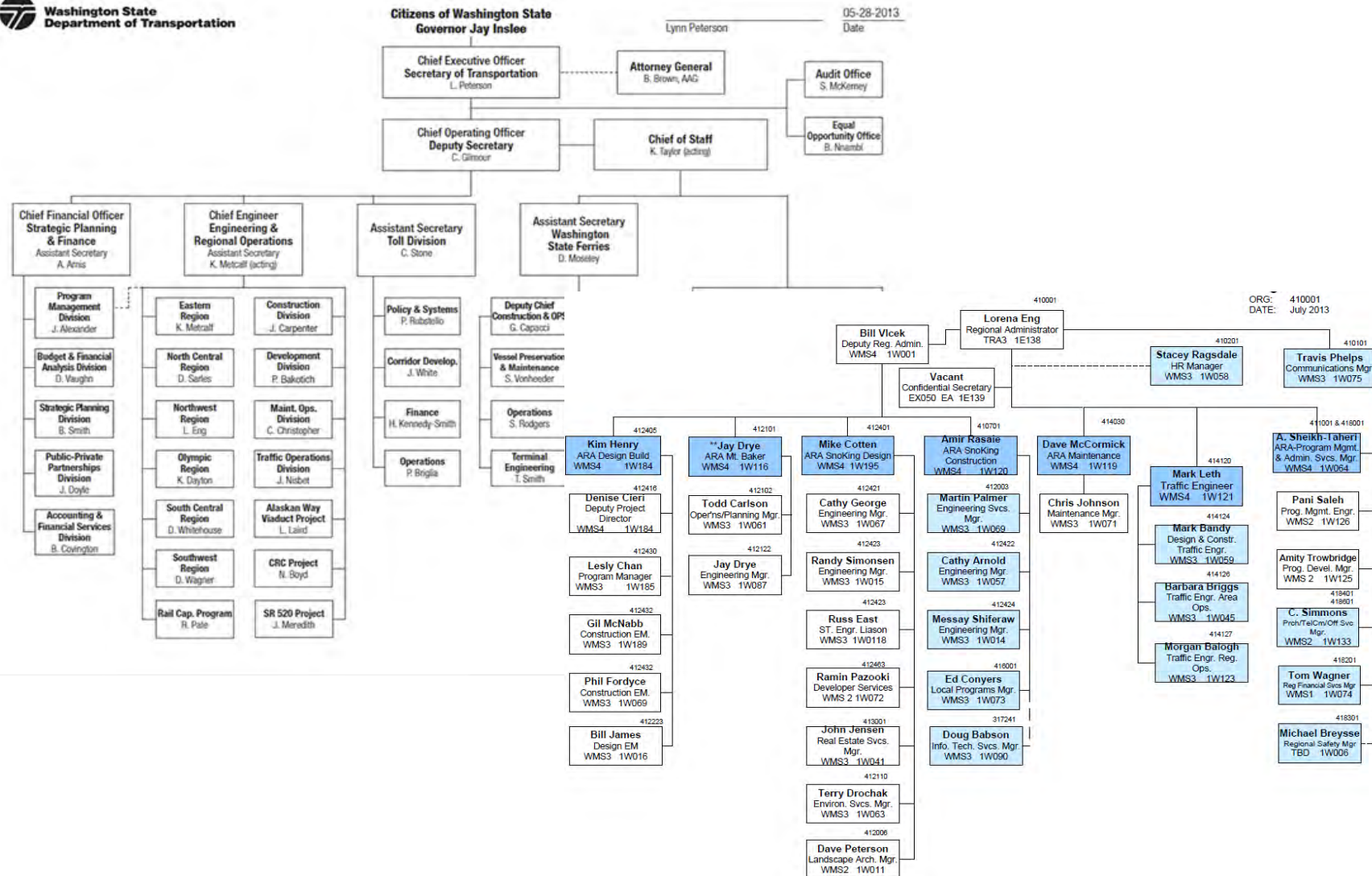
Discussion: **Two extremely different org charts**

- Both states are considered to have good TSM&O programs.

- What are the strengths and weaknesses of each organization?

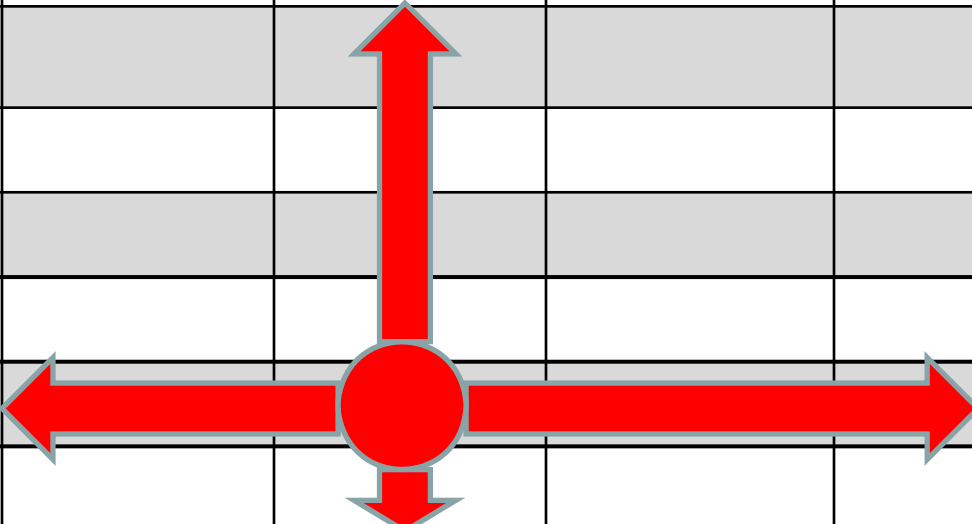- What would be best suited to your situation?

Innovative Strategy: Colorado DOT

- CDOT Executive Director's charge (2013):
  – Established Division of TSM&O, Division Director
  – Develop organization structure
  – Strategic Plan
  – New units: Corridor Management, Incident Management and Event Management
  – Staffing Assessment (needs, gaps, realign resources)

- Balance regional and HQ ops functions
  – Realigned regional signal ops to report to TSM&O Division

- Developing Operations Performance Measures

Organization as integral to all agency key capabilities

CAPABILITY LEVELS FOR IMPROVING TSM&O EFFECTIVENESS				
DIMENSIONS	**Level 1 Performed**	**Level 2 Managed**	**Level 3 Integrated**	**Level 4 Optimizing**
Business Processes				
Systems & Technology				
Performance				
Culture				
Organization/Workforce				
Collaboration				

Question: how do the other five dimensions affect (or are affected by) organization?

- Business Processes
- Systems & Technology
- Performance
- Culture
- Collaboration

Self-Evaluations of Capabilities from ROF Participants

DIMENSIONS	LEVEL 1 PERFORMED	LEVEL 2 MANAGED	LEVEL 3 INTEGRATED	LEVEL 4 OPTIMIZING
Planning & Programming	5	7	3	
Systems & Technology	4	5	6	
Performance Measurement	1	9	3	1
Culture	6	5	4	
Organization/ staffing	6	7	2	
Collaboration	2	11	2	

Levels of organizational capability – an exercise

1. What did you indicate as your agency's current level of organizational capability?

2. What will it take to get to the next level of capability?

Note: You will also have an opportunity to discuss this with your own state colleagues on Friday morning.

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Staffing Issues

- Does TSM&O have unique staffing requirements -- professional/non-professional/field

- What are the needed core capabilities, i.e., the KSAs – management and technical?

- How can they be acquired?

Staffing Considerations

- Position specifications (KSAs) and grade levels for key technical capabilities

- Acquiring the needed capabilities (engineering vs. operations:
  - On the job training (who does it?)
  - Outsourcing (if staff slots limited)
  - Stealing (from other DOTs, consultants?)

- Recruitment and Retention (external competition)
  - Grade Levels – are they attractive?
  - Conditions of employment? ($$ & career opportunities)
  - Training and co-training provided by ……………?

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Outsourcing: Threat or Opportunity?

What functions could be outsourced?

- Engineering & planning (ConOps, architecture, ITS systems design)
- TMC staffing
- Traffic data and analysis/modeling
- ITS device/communications/systems maintenance
- Safety Service Patrol
- Construction inspection

- How can you best manage performance?
- What core capacities *must* be in-house?
- What are you doing and why?

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Discussion and Homework to Take Back

- What level do you think your agency is currently?

  – Why did you select that level?

  – What steps might be taken to get to the next level?

- What are the staffing challenges for TSM&O within your organization?

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Main points – Take Away

TSM&O has unique organizational requirements (vs. legacy)

- Includes functions not easily accommodated in legacy organizations.

- No one "best" organization given differences in size/number of regions in state; scale of program

- Commitment to real time customer service from leadership and other units

- Management recognition of special staffing needs – technical, managerial and collaborative

Criteria for effective organizations

➢ Link between responsibility and authority for key functions

➢ All units in agency need to understand/support real time functions

➢ Reporting with accountability to monitor effectiveness

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Resources

- SHRP2 L06: Institutional Architecture to Improve Systems Operations and Management

- SHRP2 L31: CEO/Executive Level Presentation on TSMO and accompanying guide book

- AASHTO Systems Operations and Management Guidance on-line tool: www.aashtosomguidance.org

- Creating an Effective Program to Advance Transportation System Management and Operations Primer (FHWA-HOP-12-003)

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