Institutionalizing CSS

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Two-Part Lecture

I. The DOTs
   • The primary transportation system revenue collectors, spenders, owners, and operators
   • Key reference: NCHRP 480, Section G

II. The Universities
   • The primary suppliers of talent
Rate Your DOT

• Now that you know what CSS is, rate your state DOT on how well they have integrated CSS practices into all aspects of their business
  – 0 to 10, with 0 being no use at all and 10 being complete integration in everything they do
  – Justify your answer

Rate Others

• State DOTs have limited scopes. Many others play key roles in building and managing surface transportation systems
• For those in class familiar with a local DOT, a consultant, a toll authority, etc. make the same rating as on the previous slide
Follow Up Discussion

- Does CSS just apply to state DOTs?
- Does CSS just apply to large projects?
- Can profit-conscious consultants also apply CSS principles?

Does DOT Size Matter?

- Is CSS easier to apply in smaller state DOTs than larger?
  - Make the case that it is easier in the Connecticut DOT, with 4,000 miles of primary roads
  - Make the case that it is easier in the NCDOT, with 80,000 miles of mostly secondary roads
Does Centralization Matter?

- Is CSS easier to apply in a state DOT that is highly centralized?
  - Make the case that it is easier in centralized DOTs with strong boards and headquarters
  - Make the case that it is CSS easier in decentralized DOTs with strong and almost-independent divisions

Why Are DOTs Falling Short?

- D’Ignazio (ITE, 2006) cites:
  - Resistant to change
  - Perceived higher costs
  - Lacking clear understanding of CSS
  - Liability concerns
More Reasons DOTs Are Falling Short

- CSS is a top-down initiative to this point, which bureaucracies naturally resist
- Lack of physical inventory
  - Tough to manage what you don’t know you have
- Lack of liability information
  - Little feedback on lawsuits
- Post-project evaluations lacking

Lack of Safety Management System

- Safety is main concern (NCHRP 480)
- No practical substantive safety yet
  - Slow progress in disseminating good models and methods
  - Highway Safety Manual due soon
- Fall back to normative safety for lack of feasible alternative
Lack of Customer Input

• How does DOT know how happy customers are? Should we believe…
  – DOT annual report?
  – Various organization report cards?
  – Academic studies and benchmarks?
  – Anecdotes and chatter?
  – Election results?

How DOTs Can Hear the Customers

• Focus groups and surveys
• Different and better performance data collected
• Independent auditors
• Financial rewards to employees and consultants
• Tie agency revenue to performance
Changing DOT Organization

• Draw a diagram of your state DOT current organization
• Draw another diagram of how a typical highway project moves from inclusion in the TIP to ribbon-cutting
• Does the shape of the first diagram affect the shape of the second?

Alternative Organization Structures

• Becoming process-driven
• Overcome the “stovepipes”
  – Easier multidisciplinary team formation
• No more “chucking the project file over the wall”
  – Staff continuity with project
• Single voice to public
• Encourage project management specialists
One Idea: Form a Project Management Unit

• Lead project start to finish
• Skilled managers
  – Compete with each other for best projects
• Other units are resources to include on team when needed
  – Let planners plan, designers design, etc.
  – Units make themselves more useful to get more work

Part One Summary

• DOTs are adopting CSS very slowly
• CSS is more than just a state DOT opportunity
• There are many hurdles to overcome
  – Becoming customer-responsive is probably the biggest
• DOTs may have to change their organizational structures