CEO Leadership Forum

for State Departments of Transportation

May 2003




A Summary Report

Sponsored by
American Association of State Highway and Transportation Officials

Transportation Research Board of the National Academies

Federal Highway Administration

Funded by
National Cooperative Highway Research Program

Hosted by
University of Minnesota
Center for Transportation Studies

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July 2003

To the Reader,

This report summarizes the AASHTO 2003 CEO Leadership Forum. Over three days, we explored the challenges and opportunities facing our state transportation organizations. We focused on the critical issues we all have in strategic leadership, program delivery, and system operations; and we developed actions to support CEOs and their organizations in these areas.

I found this forum to be a wonderful exchange of ideas and experiences and every bit as successful as our first CEO event in June 2000. This report summarizes the presentations and rich conversations we had with each other and, most importantly, lists the 21 action plans produced at the forum. We are committed to following up on these directions. I know many of us who attended are already acting on the innovative ideas we learned about from our peers.

I hope this report will help prompt actions and innovations by a broad audience that will foster meaningful and lasting advancements in our transportation system.

-James Codell
President, AASHTO

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Introduction

The forces facing state departments of transportation (DOTs)—whether political, institutional, economic, work force, or technological—are challenging department leadership today in ways never before experienced. With the added challenge of budget deficits in many states, this environment is affecting how each DOT carries out leadership strategies, delivers programs, and operates its transportation systems. In efforts to foster in-depth discussion and develop action plans for addressing these, and other, issues, the Center for Transportation Studies (CTS) hosted a three-day CEO Leadership Forum. The event, which took place May 4–6, 2003, at the University of Minnesota, was sponsored by the American Association of State Highway and Transportation Officials (AASHTO), the Transportation Research Board of the National Academies (TRB), and the Federal Highway Administration (FHWA). Funding was provided by the National Cooperative Highway Research Program (NCHRP).

Carol Molnau

James Codell

Robert Johns

CTS Director Robert Johns, Lt. Gov. and Mn/DOT Commissioner Carol Molnau, and AASHTO President James Codell, kicked off the first day of the forum, which included presentations built around three forum topics—strategic leadership, program delivery, and system operations—and set the stage for more focused interaction later in the forum.

"Because DOT leadership is being challenged as never before," Molnau remarked, "events like this are so valuable in gaining resources and sharing best practices that will enable us all to carry our leadership strengths in finding new and better ways to build and manage the nation's transportation infrastructure." In that same vein, Codell urged participants to candidly express their thoughts and ideas throughout the coming discussions. "It is only by being candid," he said, "can your peers reap the benefits of your experiences."

During opening speaker presentations, John Brandl, a professor at the Hubert H. Humphrey Institute of Public Affairs, discussed strategic leadership and the forces of change affecting state governments and their leaders. Next, Steve Lockwood, vice president with Parsons Brinkerhoff, looked at how state DOTs could better handle the transportation demands of a just-in-time society by improving their system operations. Finally, Tom Warne, president of Tom Warne and Associates, spoke about program delivery and the changing role of a state DOT CEO.

Forum invitees, including Codell, TRB executive director Robert Skinner Jr., and AASHTO executive director John Horsley, also took part in a series of unique conversation circle discussions designed to address each of the three forum topics.

The event culminated with a large-group brainstorming session followed by small work group sessions geared to finalize action plans to carry out the initiatives and ideas generated throughout the forum. The group came up with 21 specific action plans, which the sponsoring organizations, through an NCHRP panel, are now in the process of prioritizing for future implementation.

"It is only by being candid, can your peers reap the benefits of your experiences."

—James Codell

"We have a complex web of relationships that have to be nurtured," observed Frederick "Bud" Wright, FHWA executive director. "All of those entities are part of a transportation delivery team. We can't have success at FHWA, unless the entire team is successful. We can only be successful if you [state DOTs] are successful."

This report summarizes the main events of the three-day forum for state departments of transportation and lists the 21 action plans for strategic leadership, program delivery, and system operations developed during working sessions at the forum. Surveys summarizing the strategic initiatives of each participating state DOT concerning the three main forum topics are published in a companion document to this report.

A slide presentation summarizing the 2003 CEO Leadership Forum is available from CTS online in PDF format (480 K) at **www.cts.umn.edu/pdf/ceoleadershipforumslides.pdf**.

Presentations

Panelists John Brandl, a professor at the Hubert H. Humphrey Institute of Public Affairs, Steve Lockwood, vice president with Parsons Brinkerhoff, and Tom Warne, president of Tom Warne and Associates, each offered varied perspectives on the issues challenging state DOTs. These discussions were built around three forum topics—strategic leadership, program delivery, and system operations—and set the stage for more focused interaction later in the forum.

Strategic Leadership

"The current fiscal difficulties facing state governments will be around for a long time and will make life tough for state DOTs," Brandl predicted in his opening remarks. He painted a dismal economic picture for state governments and the federal government as well, and pointed out that much of the current economic problem—though brought on by several factors including a down-turn in the technology market, corporate scandals, and the September 11 terrorist attacks—was exacerbated by the capital-gain spikes state governments experienced throughout the '90s. With these windfalls, he explained, states spent much more money than normal. Then, when the economy slowed down, income tax revenues went down, leaving most states with the worst deficits in history. He focused on the economy, he said, because it is the basis of all state funding, and since the economy currently is not growing, this puts a great strain on state budgets.

John Brandl

Brandl explained that education is the largest single budget item in a state's general fund budget, followed by healthcare, and then, transportation. With a strong education lobby fighting for more and more money and healthcare expenditures predicted to grow by close to nine percent per year for the rest of decade, Brandl says transportation is facing stiff competition for funding in the coming years.

He offered a ray of hope for DOTs, however, noting that their prospects are better than in other parts of state government who are also competing for funding. DOTs have more powerful accountability devices, he explained, and what they do is more visible and tangible than other sectors of government, allowing citizens to easily recognize what they are getting for their money. In addition, DOTs also use competitive contracting more than other areas, which leads to innovations that better serve the public.

"At the heart of classic American thinking on both the economy and government is the necessity of competition," Brandl contends. "But most parts of governments largely do not have competitive powers built into them. Until and unless state governments, in general, resort to competition in one form or another to reform and improve how they get their work done, they will have difficult fiscal times."

"Transportation," Brandl added, " is ahead of other government functions in using competition."

System Operations

Lockwood then moved the discussion from the broad challenges facing state government in general to more specific challenges facing state DOTs. "Increasingly, moving into the twenty-first century, strong CEO leadership is needed as DOTs evolve from the classic single-purpose entity towards much more flexible organizations responding to ever-changing missions with ever-increasing efficiency," he said. "Today's DOTs require more flexible, collaborative, and entrepreneurial leadership, and in times of resource allocation crunches, the capability of managing internal and external expectations."

Over the past four years, Lockwood explained, CEO roundtable meetings focused on change management topics were a regular feature of AASHTO board meetings. This year, reauthorization and

changes in administration, the economy, and the national security environment are adding to the challenges of continuous change management, and a winter 2003 AASHTO survey of current CEOs, in fact, revealed three areas of particular concern among DOT leaders, on which the forum discussions were based:

- Strategic leadership, including strategic planning and implementation, public and private partnerships, performance measurement, and accountability
- Program delivery, including funding and finance, workforce retooling, environmental streamlining and steward ship, and internal organizational structure
- Systems operations, including congestion and incident management, as well as operations adjustments for security and safety

SteveLockwood

Tom Warne

Lockwood focused his remarks on the real-time systems operations issues, noting one central dilemma confronting DOTs is their growing responsibility for a network that is essentially mature and is increasingly congested. There are, he explained, reduced opportunities for substantial expansion because of resource issues, physical constraints, and environmental and community concerns. Yet, DOTs are increasingly dealing with a just-in-time society where time is ever more important and reducing delay and improving transportation reliability is critical. That, he says, leaves department leaderships with the tough policy question: What can be done to deliver improved mobility now and at an affordable cost?

For most DOTs, Lockwood believes that improving and even maintaining transportation service will depend substantially on making the best use of the existing network. This, he believes, is where real-time systems operations come into play. Competition for scarce resources, along with other physical, environmental, and social constraints will drive demand for operational efficiency, and, Lockwood said, there are substantial opportunities for real, measurable, significant improvements in this area. Such improvements would also help recapture lost capacity on urban and rural roadways, on which, he explained, half of delay is due to non-recurring congestion—not capacity shortfalls—from construction work zones, bad weather, poor signal timing, breakdowns, and crashes. "DOTs can address the challenges of providing effective services in light of resource constraints by trying to develop and carry out effective operational strategies," Lockwood argued. "By and large, it is not a question of money; these are improvements that can be made in a relatively short time period compared to capacity, but they do require re-thinking how DOTs do that type of business organizationally, and to a certain degree, with technology."

Movement to systems operations and management is distinct feature of where DOTs are going in the next 10 to 15 years, Lockwood said. Developing an operational focus has significant implications on organizational structure, skills required, definition of mission, and the partnerships required to deliver results and, he reiterated, will come from strong leadership within DOTs.

Program Delivery

"There are, indeed, significant opportunities for innovation and change," Warne agreed. "And yes, strong CEO leadership is the key to making those changes." According to Warne, successful DOT leaders now need a view of life that is different from the past, and his remarks centered on the attributes he feels will be required by CEOs in order to remain effective.

"For 35, 40, 50 years, we've delivered on our transportation systems and have been engineering organizations," he said. "Our future, however, lies with those who lead and operate in a more

entrepreneurial sense. Part of your job as a CEO is to break down barriers that prevent you from being more businesslike."

DOT leaders of the twenty-first century also must be able to bring the public and private sectors together and create the kind of environment that fosters creative thinking, Warne advised, adding that most DOTS do not have the business commercial unit within their organizations to negotiate partnership agreements, and that perhaps AASHTO should have a role in helping DOTs develop such units. He said, too, that leadership implies mentoring and motivating others to succeed. "We need to recognize that leaders are not special, but they do have a special opportunity to effect change. As CEOs, we need to bring leadership to our DOTs to build a grander vision of the future. It's your leadership that will cause the change to occur."

Given the role of intelligent transportation systems now and in the future, Warne predicted that DOT leaders must also be technologists who appreciate where technology will take their agencies and must understand how they can use technology to their benefit. "There are huge technological opportunities, and you need to understand those," he urged.

"Our future lies with those who lead and operate in a more entrepreneurial sense. Part of your job as a CEO is to break down barriers that prevent you from being more businesslike."

—Tom Warne

Warne reminded the group of the need to view customer service in a new light as well. "We're not just out there just building roads. We are building transportation systems that enhance communities, move people efficiently, and do good things for our communities. If we start giving customers what they want, they'll start expecting it all the time. I hope they start expecting it from us all of the time because that's what they deserve and that's what they ought to be getting."

Later that evening, humorist Dale Henry, with Your Best Unlimited, took a lighter approach to the leadership issues examined at the forum. In a presentation entitled "Sizzle or Fizzle: Leadership Country-Style," Henry observed that while transportation CEO's are not special people, they do have a special opportunity at the forum to improve the way transportation departments do business.

Conversations

Forum invitees took part in a series of unique conversation circle discussions designed to address each of the three forum topics in detail. The first issue that surfaced involved strategic planning versus strategic management. Most participants agreed that there is a big difference between putting a plan together on paper and actually making the plan work. Others added that strategic planning must be doable, and that as managers, DOT leaders must be able to communicate the strategic plan effectively and also be willing to accept failure from time to time. "The key is not the plan, but rather the management of that plan and knowing that it is okay to fail," said David Sprynczynatzk, director of the North Dakota DOT. "In fact, if you don't fail, then you've probably not gone far enough in terms of planning strategic activities."

"As a CEO, it's up to you to communicate to upper and middle management that they will be responsible for the success of your department," Kentucky's James Codell added. "To ensure continued success, you need to recognize the need for upper and middle management to be given the reigns to move forward."

At the Utah Department of Transportation, for example, they've honed their annual strategic plan down to four goals. "We have 131 objectives as a department. They are very valid and important, Individually, I can speak to each of them, but I found it difficult to tell the common guy on street what we do," observed John Njord, executive director of the department. "We can boil everything we do into four goals: take care of what we have, make system work better, improve safety, and increase capacity."

Next, the discussions shifted to other challenges confronting state DOTs in the next few years. "I think we have to do things completely differently," said Commissioner Bryan Nicol with the Indiana DOT. "We have to figure out how to do all of these different things to change the way we do business and get the public on our side. It's a different world, and today we can use community to leverage support. With the public behind us, we can really accomplish a lot."

Gloria Jeff, director of the Michigan DOT raised several questions with regard to rallying public support. "How do we get our customers to buy in to what we do? Is there more to our mission? How do we influence and shape what happens?" she asked, then added, "We need to look at and communicate what transportation does for the economy, but do we have any measurements in place to translate that into competitive advantages we give our states? The main questions I ask myself are, Do I do what traditionally has [been received] well, or look at the broader scope of transportation—which means that I need to do things differently than in the past."

"We have 131 objectives as a department ... but I found it difficult to tell the common guy on street what we do.... We can boil everything we do into four goals."

—John Njord

Most participants agreed that while DOTs must change in order to remain effective, such change is not easy. Daniel Grabauskas, secretary and MBTA chairman with the Massachusetts Executive Office of Transportation and Construction, stated that the Massachusetts

DOT is working hard to get rid of its disjointed system and to break down barriers. He admits, however, this has its difficulties. "Clearly, we need to do a better job of communicating the ideas we have at a higher level."

"We can't rebuild our organizations without the support of the people who work there," added Douglas MacDonald, secretary of transportation, Washington State DOT. "We have to fight for the resources we need, and that means communication. Our organizations can't look the same in five or 10 years, but the problem is moving our organizations to change while getting the support of the people working there whose jobs will have to change."

Doug Differt, deputy commissioner/chief engineer with the Minnesota DOT noted some recent changes that are already re-shaping Mn/DOT. "The organization we had prior to this administration was complicated; everyone had an assistant. Since then, we've modified our organization structure to better meet program delivery needs."

"We can't rebuild our organizations without the support of the people who work there. We have to fight for the resources we need, and that means communication."

—Douglas MacDonald

The ongoing discussions lead to agreement that DOT leaders must work hard to build public trust and should focus more on how DOT projects impact customers. The group determined that public trust is essential if DOTs are to be successful in program delivery, but acknowledged that the public has enormous expectations. To address those expectations, it was suggested that DOTs first must ask the public what, specifically, their expectations are, and then understand them and demonstrate accountability by keeping promises and keeping the public involved as never before.

"We try to be sensitive to our customers and do things to lessen the impact of our projects on them, even if it costs a bit more," Jeff noted. "It's part of how we're good stewards. We can't assume that because we're always getting beat up for spending money, we can't make a case for doing better."

"We need community support for transportation with lots of other stakeholders, partners, and customers," Larry King, deputy secretary for planning with the Pennsylvania DOT, added. "Maybe we should investigate some of the tools and successful efforts that have occurred."

As talk turned to partnership-building, many CEOs stated that while they did have some strong partnerships in place, many more needed work. Other participants stated that some partnerships often generate confusion about accountability and agreed that all parties involved have to take responsibility for shared outcomes.

"Some of our projects are done by contractors, some by our workforce," said Allen Biehler, secretary of PennDOT, "Our guys made it known that it's important to be competitive with the outside world. They know what the private sector costs. There's a way to do it both ways. We benchmark—they are driven."

Kam Movassaghi, secretary of the Louisiana Department of Transportation, brought up several of his concerns including workforce issues and the importance of getting the staff to buy-in on organizational changes. With regard to money matters, Movassaghi reminded the group that while it is important to think about who is responsible for funding and who is making the financial decisions in their departments, it is equally important to stay in tune with how well they are meeting customers' needs and how well they are communicating why they are doing certain things and how the customer will benefit.

Tom Stephens, director of the Nevada DOT, agreed that communication is key to effective program delivery. "For a long time, we've said that safety is our number one issue, but our customers don't see an accident everyday. They do see potholes and traffic jams everyday," Stephens said, "so these are the issues that are top of mind for our customers."

He said also, that it is equally important to make sure DOT programs do the right things and do those things right. "We can't have the cheapest budget and still achieve the highest quality and be on schedule; there needs to be a balance. To achieve this, we need expertise, whether it's employees or consultants, we need money, and we need public trust. That's where we're having national problems right now. We need to pay as much attention to public trust as we do to expertise and money. We'll always have some problem projects, that's why we need to build, through effective communications strategies, a storehouse of public trust. DOTs need credibility and must have a good project management system as well as a good public relations plan in place to build it. We want other things besides just the problem projects to be on the public's mind." Performance measures, he added, should be part of the strategy.

"Our department was working on a project that didn't legally require any public input, but was a high-visibility project," offered Connie Sorrell, associate director of the Virginia DOT. "We put out a major effort to involve the city's top 50 employers to discuss the project. We knew it would cause disruption, so we wanted to work through the plan together. Because of this process, the project turned out successfully from a public trust point of view."

Rodney Haraga, director of the Hawaii DOT, agreed that while effective communication and project management and delivery are important, his main challenge is hiring an experienced workforce to carry out these tasks. "Our pay scales are low, but the cost of living is high," Haraga explained. "How do you sustain workforce without the quality or quantity of civil engineers? AASHTO, and perhaps other organizations, can help by awarding scholarships, but how can AASHTO work even closer with universities?"

"It's a different world, and today we can use community to leverage support. With the public behind us, we can really accomplish a lot."

—Bryan Nicol

Another issue raised in the discussions involved the number of strategic objectives DOTs set for their department. Most participants agreed that fewer, more focused objectives would be better than setting a hundred, disjointed departmental goals. Others added that striking the right balance of goals and activities is equally important. "It's good to be clear [about what the strategic goals are], but not at the peril of other things," explained Debra Brisk, with the Arizona DOT.

After each conversation circle, summary presentations were given by three NCHRP panel members and followed by general discussion. Thomas Larson, a consultant, led the strategic leadership session; PennDOT's Larry King led the program delivery session; and Susan Martinovich from Nevada DOT led the system operations session.

In Summary

In a summary panel discussion, Robert Skinner, Jr., executive director with TRB, Frederick "Bud" Wright, executive director with FHWA, and John Horsley, executive director with AASHTO, each reflected on the day's dialog and offered their observations.

Robert Skinner, Jr

TRB

"I was struck by how many tensions there were mentioned that state DOTs have to deal with including the balance between quality and schedule," Skinner declared. "No one likes silos, but it's not clear what the alternatives are. I linger over the balance of listening to what the public says versus helping the customer become a more demanding consumer. Our customers have no idea how to judge system performance. We don't make it easy for them to calculate the cost of delay. I don't know if public surveys will solve our challenges.

He recalled that at a CEO meeting three years ago, the focus was on research statements that dealt with needs of CEOs. Now, says Skinner, there is need to talk about how to reconstruct the highway system and keep it in service. "Clearly, we're also struggling with safety. It's always everyone's priority, but we can't require everyone to wear helmets or seatbelts and not use cell phones when driving," he lamented. "I also noticed that so far, there has not been a lot of discussion about money, at least not as much as I expected."

FHWA

Bud Wright

Wright then stated that what has become clear to him from the discussions is that the three topics [strategic leadership, program delivery, and system operations] are not separate and distinct; they are intertwined. "We need to ask ourselves what defines success and how do we measure it," he noted. "We've talked about this at FHWA, and we believe partnership is the key. Relationships are not simple; they require work. There's no question that we have relationships with state DOTs and other state agencies. We have a complex web of relationships that have to be nurtured. All of those entities are part of a transportation delivery team. We can't have success at FHWA, unless the entire team, including state DOTs, is successful."

"We believe partnership is the key...we can't have success at FHWA, unless the entire team, including state DOTs, is successful."

—Bud Wright

FHWA does play a unique role in that it has accountability at a national level for how money is spent, Wright continued. "We understand the partnerships and support them—without them we have no reason to exist. We are customer, supplier, and partner with state DOTs. We can offer a national perspective; there's a lot we know and don't know. We want to be a part of the learning."

He added that much could be gained from a domestic scanning program that parallels the international program that AASHTO, and others, have been part of. "We learn a lot from other countries about the state-of-the-art around the world. We need to build a continuum of

best practices, and I do hope we can talk more about a domestic scanning program like the international program already in place."

John Horsley

AASHTO

"It is also clear from our discussions that all CEOs here [at the forum] are looking for a better way to deliver in an increasingly demanding political climate where you want to do more and more," Horsley observed. "Some of the things AASHTO is doing—or better do—to be responsive to facilitate institutional change in response to our CEOs include helping to sponsor this event, at the CEO level, and starting a new CEO orientation program in which we visit and meet with new DOT CEOs."

"It is also clear from our discussions that all CEOs here [at the forum] are looking for a better way to deliver in an increasingly demanding political climate."

—John Horsley

He recounted a few more of AASHTO's latest initiatives, including several successful international scanning projects, and discussed plans for future initiatives including the possibility of creating various centers of expertise specifically to address safety, asset management, and operations issues. "We're also considering several other initiatives," Horsley said, "including contracting former DOT CEOs as advisors and using the peer-to-peer network for technical assistance. We also need to figure out how to pay for travel [for staff] in the next few years. I know several people here who were able to attend this forum because we could pay for their travel. I think we should consider scheduling multiple events at the same time and try to take more advantage of Web and video conferencing and teleconferencing technologies."

Horsley briefly discussed the recent changes made to AASHTO's committee structure, which, he explained, enables the organization to better respond to changing world conditions. "We are still not immune from stove-piping," he admitted. "Rarely do AASHTO committees talk to each other. We want them to meet regularly and want to get them communicating because what we do is so intertwined. We're working hard to foster that change."

The event culminated with a large-group brainstorming session followed by small work group sessions geared to finalize action plans to carry out the initiatives and ideas generated throughout the forum. el, are now in the process of prioritizing for future implementation.

Implications for Action

In one of four summary presentations designed to frame the final brainstorming sessions, Lance Neumann, president of Cambridge Systematics, reported on the various crosscutting themes that surfaced throughout the forum discussions. "We've talked about a whole range of issues," Neumann said, "now we need to talk about what we want to do about them."

Lance Neumann

Strategic planning was one such theme. According to Neumann, this encompasses content, which requires DOT leaders to define and set a manageable number of priorities, as well as the more challenging tasks of implementation and management. "Driving strategic objectives and actions through large organizations is complex and difficult," he warned. "The role of the leader is to set priorities and drive action plans, but the real work must be done by others."

Neumann further explained that customer concerns must be reflected in all strategic objectives, performance measures, and performance expectations. This requires continuous and effective communication efforts, which are critical to understanding customers' needs, explaining strategic directions and results, aligning and motivating employees, and developing internal and external partnerships. The bottom line, Neumann said, is that DOTs must continue to evolve into more flexible, responsive organizations.

Next, the discussions generated during the conversation circles were boiled down into several action ideas, based on the three forum topics, and presented to the group just prior to the brainstorming sessions.

Constance Sorrell, associate director of the Virginia DOT, outlined several strategic leadership-related action implications recommending first, the development of strategic themes and performance measures for benchmarking performance among peer states. She suggested that DOTs share information about their current organization structures and rationales and the ways in which their organizations have changed. Sorrell also reiterated the importance of analyzing and benchmarking state DOT human resources activities and suggested that new forums be established to further engage DOT CEOs and facilitate the exchange of ideas and experiences.

Finally, she supported the idea of more joint strategic planning by FHWA, AASHTO, and state DOTs for better alignment of plans and delivery of outcomes, as well as the creation and coordination of a pool of expert facilitators to help state DOTs in their partnering efforts.

Barbara Martin, chief of organizational development with the Montana DOT spoke about program delivery action implications, stating that program delivery is a leadership issue dependent on several factors such as: integrating customer, employee, and department needs; building public trust; practicing environmental stewardship; positioning transportation as a factor in economic sustainability; and identifying core skills to carry out the mission.

Martin also presented ideas for the role various agencies could play in further developing DOT leadership. For example, AASHTO management courses could focus more on the players and their roles. Through various scans and NCHRP studies, DOTs could develop strategies for building public trust. These agencies also could help DOTs identify their core businesses and the competencies required to support them as well as develop tools to educate the public and other stakeholders to make them stronger partners.

On the systems operations side, Tony Kane, director of engineering and technical services with AASHTO, recommended that operations be built into state DOTs and that exemplary DOTs and partnerships be showcased. He suggested, too, that guidebooks be created for innovative traffic control and contract specs that include a way for DOTs to calculate their return on investment for incident management expenditures. Kane agreed with the need to establish domestic scans with FHWA and NCHRP and to review design and construction guides to incorporate operations.

Finally, he recommended the creation of an FHWA-supported senior work zone advisory committee and incident management coalition and suggested DOTs and FHWA begin operations dialogues with the auto industry to discuss mobility, safety, and incident management issues.

In the end, the group came up with 21 specific action plans, detailed on pages 9-12 of this report, which the sponsoring organizations, through the NCHRP 20-24(29) panel, are now in the process of prioritizing for future implementation. Larry King, NCHRP 20-24(29) panel chair and PennDOT deputy secretary for planning, wrapped up the forum looking ahead to the publication of this report, the action plans, and the state surveys, as well as the posting those documents and follow-up activities on the AASHTO Web site at: **www.aashto.org**.

STRATEGIC LEADERSHIP

ACTION PLAN – A.1

Title of Action: Development of state DOT strategic themes and performance measures for benchmarking performance among peer states

Description of the Action: National effort to group States on several major themes to develop common benchmark performance measures.

Need for action: Help define success, help establish credibility with stakeholders.

Goals of action: Provide a communication tool for state DOTs to demonstrate the effectiveness for a State's effort. Yard stick for performance. Focus resources.

Major steps to carry out action:
1. Establish agreement on Strategic Themes (look at NCHRP, 20-24(20), work). Establish what matters to the customers
2. Measures for each theme (look at NCHRP, 20-24(6), work)
3. Outcome measures
4. Develop criteria for grouping of peer states
5. Include context of differences
6. Peer grouping will be different for each theme and measure
7. Regional workshops (effort) to vet process and product.

Products of action: Report that contains a matrix that establishes what peer group states are in for each measure. Metrics associated with each measure that establish what "good" performance is.

Desired outcome: Focus resources

Leadership and support responsibilities for implementation: AASHTO & FHWA will take the first cut and the States will vet the product.

ACTION PLAN – A.2

Title of Action: Sharing of current state DOT organization structures, their rationale and their changes from the past

Description of the Action: Update the AASHTO 2000 publication on State DOT organization charts and note the year organized in that fashion. Include a narrative on the rationale for organizing that way and note the changes from an earlier time period—-perhaps 10 years earlier if possible.

Need for action: Tremendous forces of change have taken place in recent years from a new focus on operations and customer services, downsizing and outsourcing, delegations down and elimination of layers, and alignment toward delivery of core services, and, change in top DOT leadership.

Goals of action: Share knowledge among state DOT CEO's

Major steps to carry out action: Survey of State DOT's and consultant support to analyze results and document the rationales for the organizational structures chosen. The Standing Committee on Administration(SCOA), subcommittee on human resources will be involved

Products of action: Report and compilation of organizational charts

Desired outcome: Ability of State DOT CEO's to exchange ideas and leadership/management approaches with peer States

Leadership and support responsibilities for implementation: AASHTO SCOA and NCHRP 20-24 financial support

Timing: Complete by the end of CY2003

ACTION PLAN – A.3

Title of Action: Analysis and benchmarking of state DOT human resource activities

Description of the Action: Major national study to benchmark various human resource activities for comparison among peer groups of states. Group states using appropriate context information, which would recognize qualitative and quantitative characteristics, the mix and capacity of the states' technology development, etc.

Need for action: Provide DOTs with benchmarks to compare with own human resource commitments and results

Goals of action: To enable state DOTs to strive for above-average (or better) use of human resources, and to help with the state DOT credibility-with-stakeholders issue.

Products of action: Set of benchmarks for various activities by peer group states.

Desired outcome: Continuous ratcheting up of state DOT productivity, efficiency, and effectiveness in the use of human resources.

Leadership and support responsibilities for implementation: Needs an AASHTO committee(s) sponsorship – joint SCOA/HR Subcommittee and SCOQ?

Timing: Recommend for next round of NCHRP Project 20-24 funding.

Resources needed: Funding for NCHRP Study

ACTION PLAN – A.4

Title of Action: Establishment of new forums for state DOT CEO engagement and exchange of ideas and experiences

Description of the Action: Need for action: CEOs have indicated that networking and sharing of ideas transfers valuable knowledge and perspectives

Goals of action: Provide more tools for effective leadership through transfer of intellectual capital

Major steps to carry out action: AASHTO should identify additional opportunities to bring CEO's together and utilize new and different techniques for interaction

Products of action: A variety of forums and other opportunities for interaction, carefully scheduled and taking advantages of various media and technology including video conferencing.

Desired outcome: Stronger synergy among CEOs and saving of time and effort by having learned from others' experiences.

Leadership and support responsibilities for implementation: AASHTO needs to assume the lead with input from the CEO's as to structure and format, content and scheduling.

Timing: This addresses an element of the current AASHTO strategic plan and should be accomplished as soon as possible.

Resources needed: The AASHTO Board of Directors could charge the TEAM Institute Steering Committee to take the lead for this initiative. The level of resource requirements will depend on the resultant agenda of events/exchanges to be undertaken. These requirements are not expected to be prohibitive.

ACTION PLAN – A.5

Title of Action: Joint strategic planning by FHWA, AASHTO and state DOTs for better alignment of plans and delivery of outcomes

Description of the Action:
Need for action: Having separate strategic plans by State DOTs and FHWA inhibits the ability to deliver outcomes in a most effective and efficient manner.

Goals of action: Align State DOT and FHWA strategic plans, thinking, leadership, and management strategies to deliver outcomes.

Major steps to carry out action: Obtain alignment on national strategic plans by AASHTO and FHWA. Where appropriate, seek strategic alignment among group of states, FHWA, and other Federal and State stakeholders and partners. FHWA Division Office and State DOT should ensure strategic alignment with congruency as the ultimate goal.

Products of action: Team and joint success to achieve outcomes.

Desired outcome: Team and joint approach on strategic thinking and leadership resource allocation, program delivery and achieving success and outcomes that benefit the States and their citizens. Thus, benefits would evolve into national outcomes and success.

Leadership and support responsibilities for implementation: • National Level – FHWA & AASHTO leadership teams • Regional Group of States – FHWA DFS and group of states working Federal and State Partners • State Level – FHWA Division Administrator and State CEO

Timing: National – by October 1, 2003
Regional – As appropriate
State - Immediately

Resources needed: To be determined at time of alignment

Advisory – Every attempt should be made by FHWA to engage other US DOT modes to facilitate a US DOT alignment with State DOTS.

ACTION PLAN – A.6

Title of Action: Creation and coordination of a pool of expert facilitators to help state DOTs in their partnering efforts

Description of the Action: Create a 'pool' or 'bank' of trained facilitators – with subject matter expertise – that states may call upon to assist in partnering initiatives (outside of the established long-standing partnering program on the project delivery / construction side). This would include some of the "soft-side" (e.g., non construction) DOT functions.

Need for action: Partnerships are critical to the core business of the state DOT.

Goals of action: To facilitate and improve the wide variety of partnership/relationships/ alignments that a state DOT must have to accomplish its mission.

Products of action: Pool of facilitators with specialization in the various businesses of the DOTs. Use of the facilitators on an on-call basis by DOTs to improve partnering.

Desired outcome: Improve the relationships and thus the results of inter-agency partnerships to accomplish DOT mission.

Leadership and support responsibilities for implementation: AASHTO sponsorship, perhaps through the SCOQ.

Timing: Immediately, following next SCOQ meeting.

Resources needed: State and AASHTO share costs on a per-facilitation basis.

PROGRAM DELIVERY

ACTION PLAN – B.1

Title of Action: Development of state DOT program and project delivery performance measures and guiding principles for their use

Description of the Action: Need for action: Work smarter with limited resources to achieve desired outcomes

Goals of action: To improve project delivery and program contribution to achieve strategic goals
Major steps to carry out action: Case studies (what to measure, how to use results, benefit realized), analysis of common principles, dissemination of principles

Products of action: Guidelines from research and case studies that enhance the credibility of state DOT champions

Desired outcome: Better on-time, in-budget, high quality projects that support program goals and strategic objectives

Leadership and support responsibilities for implementation: AASHTO & FHWA via NCHRP

Timing: 1 year

ACTION PLAN – B.2

Title of Action: Development of strategies for building community support for state DOT programs and projects

Description of the Action: Need for action: Public acceptance is key to program delivery

Goals of action: 1. Educate stakeholders in program needs; 2. Building public trust and commitment; 3. Improve communications; 4. Expand public involvement

Major steps to carry out action: 1. Synthesis of current state of practice; 2. Research to develop practices and procedures for building community support of transportation programs

Products of action: 1. Tools for education the stake holders; 2.Tools for improving communications; 3.Methodology for identifying stake holders

Desired outcome: Build community support for programs/projects.

Leadership and support responsibilities for implementation: Leadership: AASHTO and FHWA; States for implementation

Timing: Completion by FY 05 (2 year program)

Resources needed: Research funding through TRB

ACTION PLAN – B.3

Title of Action: Sharing of best practices in state DOT program delivery through scanning tours and peer reviews

Description of the Action: Need for action: Improve agency ability to deliver programs

Goals of action: Provide tools to the CEO to implement improvements for program delivery

Major steps to carry out action: 1. Determine topics where best practices are needed; 2. Conduct domestic scanning tours; 3. Conduct peer reviews

Products of action: Development of reports of successful program delivery and establishment of a web site

Desired outcome: Plan to share best practices

Leadership and support responsibilities for implementation: Leadership: Federal Highways and AASHTO; Support and funding: NCHRP

Timing: NCHRP need to do research to determine which are the important scanning topics, by FY 04
Start scanning tours in FY 05 in a 3-year program

Resources needed: Funding through TRB and FHWA. Staffing through Federal Highways, private sector and AASHTO.

ACTION PLAN – B.4

Title of Action: New methodologies for improving the accuracy and credibility of state DOT project cost estimation

Description of the Action: NCHRP study to identify and improve methodologies for project cost estimating over the life of the project development process including construction — a major study for the main NCHRP research program.

Need for action: Gaining public and legislative trust.

Goals of action: Providing the means for state DOTs to develop credible estimates and realistic STIPS.

Major steps to carry out action: State DOT(s) or AASHTO Task Force submit project for FY 2005 program.

Products of action: Better methodologies, tools, resources, and continuing repository for best practices.

Desired outcome: Focusing resources on a more realistic program of projects and improved public confidence and good will.

Leadership and support responsibilities for implementation: State DOT or AASHTO TF champion.

Timing: Submit by September 15, 2003 to NCHRP

Resources needed: $350,000

ACTION PLAN – B.5

Title of Action: Development of guidelines for identifying the benefits and risks of various statewide and project-related transportation financing options

Description of the Action: Submit detailed request to the NCHRP FY 2005 program.

Need for action: To optimize resources and the mix of options to deliver programs and projects that meet public expectations over the short and long term – maximize benefits and minimize risk.

Goals of action: Better tools for analyzing financing options.

Major steps to carry out action: Flesh–out and submit to NCHRP by September 15, 2005.

Products of action: Guidance Manual and tools.

Desired outcome:
Best uses of funds to deliver program

Leadership and support responsibilities for implementation: State DOT or AASHTO committees submit.

Timing: Submit by September 15, 2003.
Resources needed$400,000

ACTION PLAN – B.6

Title of Action: Identification and development of methods to determine core competencies for today's state DOT functions

Description of the Action: Identify and disseminate information on processes for assessing competencies. Determine best practices in DOTs and other public organizations that operate in a multidisciplinary, multimodal environment.

Need for action: Crucial to incorporate multiple inputs and disciplines in transportation decision making and program delivery (e.g. social, economic, political, technical implications) and to ensure that DOT employees have the skills needed for effective program delivery.

Goals of action: Use the core competencies as a focus for recruitment, retention, succession planning and training. Develop a framework that allows deployment of staff based on skills and work requirements rather than depending on organizational silos to execute work.

Major steps to carry out action: Identify best practices in competency assessment; Develop a tool kit that DOTs can use to identify core competencies in their agencies; AASHTO would be a clearinghouse for competencies as they are identified and aggregate and disseminate the results. Determine if there are any common competencies nationally; Compare commonalities in identified competencies with ABET criteria.

Products of action: Methodology to identify competencies; Aggregation of competencies across state; Compare competencies with ABET criteria; Publish all of the products

Desired outcome: Hire and retain by competencies and incorporate competencies into succession planning.

Leadership and support responsibilities for implementation: TRB conduct a study on the competency assessment and modeling. AASHTO disseminate results and encourage use of the competency-based system.

Timing: Panel at TRB meeting cosponsored by management and Productivity and Strategic Management committees. Final presentation of methodology at Fall AASHTO Meeting.

Resources needed: Study support; financial support

ACTION PLAN – B.7

Title of Action: Enhancement of the image of the transportation profession to ensure a recruitment pipeline and a diverse workforce

Description of the Action: Develop a public education campaign that pools the efforts of AASHTO, APWA, ASCE, ASPA, and other public service professional associations.

Need for action: Diverse workforce with competencies tied to their mission.

Goals of action: Crucial to ensure adequate pipeline of trained engineers and those otherwise trained in the

multidisciplinary aspects of transportation service delivery and to ensure a workforce which reflects the citizens we serve.

Major steps to carry out action: Identify current efforts by professional associations; Develop tools for transportation officials to use in recruitment efforts; Develop K-12 materials to attract children to math and science careers; Coordinate efforts with other associations

Products of action: Tool kits for the above actions; Proposals for scholarships, co-ops, and internships to introduce students to transportation as a career

Desired outcome: Enhanced workforce pipeline and more diverse workforce.

Leadership and support responsibilities for implementation: AASHTO's convening of relevant associations to coordinate and assess current efforts.

Timing: Convene relevant association volunteers and staff (including members of the educational community) at an AASHTO event. Link with findings from core competencies.

Resources needed: Study support; Financial support

ACTION PLAN – B.8

Title of Action: Development of alternative state DOT organizational designs and practices to improve program delivery

Description of the Action: AASHTO roundtable discussion and NCHRP research project.

Need for action: The current state DOT organizations are driven by civil service rules, internal policies, and longstanding cultural traditions. They are often steep hierarchical pyramids organized by functions with minimum interaction. This type of organization is not responsive to modern project management approaches, which requires creation of interdisciplinary project teams and "cradle-to-grave" project managment. Today's demands by the public for more responsive, timely, and cost-effective delivery of transportation projects require innovative changes in state DOT organizations.

Goals of action: Identify new organizational models that improve state DOT program delivery and ways of transitioning from traditional organizational approaches.

Major steps to carry out action: Before TRB begins an NCHRP research project, AASHTO should schedule a half-day to one-day roundtable discussion of state DOT leaders to share current approaches, identify issues, and help develop the scope of the research project.

NCHRP research steps:

1. Define current state DOT organizational models for program delivery.
2. Identify constraints and impediments to changing traditional organizational models.
3. Identify one or more state DOTs that have made advances in new program delivery organizational approaches.
4. Research private sector models that are applicable to state DOT program delivery.
5. Propose new organizational models to improve state DOT program delivery. The model should be flexible enough to be adapted to various state DOT governance structures.
6. Write NCHRP research report for dissemination.
7. Develop summaries and schedule presentations, peer exchanges, and information exchanges to disseminate this information.
8. Assist AASHTO in preparing implementation materials to use in helping state DOTs adapt to the new organizational model.
9. Monitor how state DOTs implement new organizational approaches and gather information on their impacts on program delivery. Discuss at CEO roundtables and other forums to provide feedback and continue refining organizational approaches that improve program delivery.

Products of action: NCHRP research report, Powerpoint summary, CEO discussions, TRB conference presentations

Desired outcome: Improved state DOT organization design will result in more responsive, timely, and cost-effective program delivery and a more satisfied public

Leadership and support responsibilities for implementation: AASHTO needs to schedule a half-day or one-day roundtable discussion of state DOT leaders to share experiences and help scope the research project.

State DOT and AASHTO staff need to write a detailed proposal to be considered by the NCHRP 20-24 panel

Timing: The roundtable discussion could occur at the 2003 spring or fall AASHTO meeting. State DOT and AASHTO staff would then write a full proposal for consideration by the NCHRP 20-24 panel.

The research project is estimated to take 18 to 24 months.

Resources needed: Approximately $350,000

SYSTEM OPERATIONS

ACTION PLAN – C.1

Title of Action: Development of a definition, an organizational model, and the core skills required for a state DOT to perform effective system operation

Description of the Action: Need for action: States need an organizational model to use as an example – which can give to the public a system that is managed and which operates effectively.

Suggest benchmark states and countries that are effectively managing their systems. Review for strategic plan measurements that reflect measurements illustrating effective management of the transportation system (if applicable).

Goals of action: Provide guidance to the DOTs and gain consistency for measuring the operation of the system and providing a consistency to the traveling public on a transportation system that runs efficiently.

Major steps to carry out action: Review if there is a bench mark agency, state or country which effectively manages the operation of the transportation system.

Identify successful organizational structures which provide an efficient, effective transportation system. Review organizational structures and roles within the organizations to streamline the process of delivering effective transportation operational systems.

Review core skill requirements to create an effective organization which will offer an efficient and managed transportation system.

Products of action: Report; Organizational model; Listing of core skills for staff within a DOT to assist in effective transportation operation; Workshop to disseminate information and share best practices.

Desired outcome:

- Well managed transportation system.
- Pro-active reaction in lieu of reactive
- Assist in 'success to the agency'
- Minimize congestion
- Reduce duplicative effort and frustration to internal and external customers
- Will assist in image of DOTs

Leadership and support responsibilities for implementation:

- Possible alignment within the organization
- Review for continual process improvement
- Training and communication
- Marketing why!
- Share leadership – experiences with other DOTs, partners

Timing: Short range need

Resources needed: Personnel to benchmark, inventory – what is the situation today and to interview and review for core skill sets

ACTION PLAN – C.2

Title of Action: Development of data resources, potential partnerships and methods to improve real-time information for effective state DOT system operations

Description of the Action:

- Define the data required for effectively operating the system on a day-to-day basis (NCHRP).
- Explore (with USDOT) relationship with automobile manufacturers and other potential information providers to use vehicle/infrastructure communications/cooperation for obtaining the needed data (AASHTO HQ w/State representatives).
- AASHTO advance discussion on value/ways to share operations information on a regional/national level (511 Coalition).

Need for action: Operating the system effectively (day-to-day and during emergencies) requires greater availability of real-time information.

Goals of action: Define what information is needed and how it can be obtained and shared.

Major steps to carry out action: See description of action.

Products of action: Definition of data needed for effective operations, identification of potential partnership with automobile industry and others, creation of mechanisms for sharing information among states.

Desired outcome: Ability to operate the system in real-time – respond to incidents, manage system, inform customers – will improve mobility, safety, security.

ACTION PLAN – C.3

Title of Action: Identification of best practices in using multi-jurisdictional regional partnerships to enhance transportation system operations

Description of the Action: Identify, gather, and share best practices on creating and sustaining regional partnerships for operations. Document benefits. Focus on partnerships with multi-jurisdictional impacts (i.e. law enforcement, transportation, emergency response).

Need for action: Coordinated approach essential for effectively operating today's transportation system.

Goals of action: Sharing success stories on existing multi-jurisdictional, multi-modal, partnerships. Learn from others success.

Major steps to carry out action: See description of action.

Products of action: Guidance, training, coordination, peer-to-peer exchange.

Desired outcome: Allow all agencies to accomplish desired outcome through coordinated approach to delivery. Whole is more than sum of parts – improve system performance.

ACTION PLAN – C.4

Title of Action: Communication of the needs and benefits of a systems operation focus in state DOTs

Description of the Action: Comprehensive program designed to communicate to diverse audiences the value of operating programs and strategies

Need for action: continue to make the case for the value of operating programs

Goals of action: provide resources for a variety of partners to define the benefits of operations

Major steps to carry out action:
- Develop research problem statement
- Conduct research and develop communication program and strategy
- Disseminate communication tools and program in variety of media
- Develop program for implementing communication program throughout partner community

Products of action: communication program and tools and strategy for delivering the message

Desired outcome: Assist agencies in describing the benefits of operations

Leadership and support responsibilities for implementation: AASHTO, FHWA, TRB/NCHRP

Timing: 12 months

Resources needed: $150,000

ACTION PLAN – C.5

Title of Action: Development of a comprehensive set of performance measures for measuring the effectiveness of state DOT system operations
Description of the Action: Development of a set of performance measures covering all aspects of operations including reliability, freight, safety etc.

Need for action: capitalize on years of effort and research in a variety of areas across the country

Goals of action: Integrated set of measures that capture key aspects of customer service as it relates to system operations.

Major steps to carry out action:
- Inventory/synthesize existing and ongoing research efforts
- Workshop to define measures, integrate and build consensus
- Publishing comprehensive catalogue
  8Monitoring implementation and results

Products of action: see above

Desired outcome: Comprehensive set of measures for defining the results/impacts of operations programs

Leadership and support responsibilities for implementation: FHWA, BTS, AASHTO, TRB, AMPO, other partners

Timing: 12 months

Resources needed: $350,000

ACTION PLAN – C.6

Title of Action: Identification of funding challenges and alternative funding sources for financing the operations of state DOT transportation systems

Description of the Action: Need for action: Catalog existing funding sources and identify new funding 'needs' for operating our transportation system. Also review for gaps between today's funding and the needs.

Goals of action: Adequately fund our needs; Increase knowledge; Know the programs and opportunities to use the existing funding sources; Review for innovation and ways to meet a DOT's needs for operations of their system.

Major steps to carry out action:
- Review what is
- Review where you want to be
- Review usage of funding
- Review gaps

Products of action: See goals

Desired outcome:
- Adequate funding
- Clearer guidelines for usage and knowledge on the sources
- Assist in 'image of DOT' by spending the dollars
- Defining value added –
- Assist in managing the system.

Leadership and support responsibilities for implementation: Market the needs; Communicate why you need the money; Respond to grant applications and needs for usage of the monies; Partner with stakeholders to support the needs

Timing: Short range – especially due to reauthorization
The opportunity is now

Resources needed: People to review: Existing programs; Potential new programs; Gaps
Communication technique back to DOTs

ACTION PLAN – C.7

Title of Action: Creation of a national coalition on incident and emergency management

Description of the Action: Create (institutionalize) a National Coalition on Incident & Emergency Management

Need for action: Effective IM requires performance driven approach via cooperation of transportation, public safety and private service supplier communities
Goals of action: Develop support for consensus on shared objectives, improved communication and cooperation, common procedures and protocols, and performance targets

Major steps to carry out action: Follow up on recommendations of 2002 Irvine Conference on Incident Management:
- Identify key participants
- Develop organizational structure for Coalition activity (committees)
- Preparation of an implementation business plan
- Educate stakeholders on stakes and issues
- Develop issues for research, resolution (see Irvine proceedings)
- Develop best practice procedures and protocols incorporating security and natural disaster practices
- Hold workshops to sort out issues and approaches
- Integrate into AASHTO policy and procedures
- Publish common guidance
- Sponsor training

Products of action: Common objectives; Key strategies; Consensus procedures and protocols; Reasonable performance measures and targets; New partnership relationship structures and MOUs; Guidelines and training

Desired outcome: National consensus on how to improve IM to further common objectives of transportation and public safety community)

Timing: ASAP

Resources needed: $250, 000 per year
Support for "secretariat"; Conference support; Research budget

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