

**NCHRP PROJECT 8-36A Research for the AASHTO
Standing Committee on Planning**

Task 3

**MANAGEMENT OF INSTITUTIONAL CHANGE
IN STATE TRANSPORTATION PLANNING
PROCESSES AND PROGRAMS**

ISSUES PAPER

TRANSPORTATION
RESEARCH BOARD

MAY 18 2000

COOPERATIVE
RESEARCH PROGRAMS

Prepared for: **National Cooperative Highway Research Program**

Prepared by: **Cambridge Systematics**

April 2000

Table of Contents

Introduction	1
Drivers of Change and Risk Factors	3
Characteristics of Effective Statewide Planning Processes	9
Conclusions	20
References	23
Acknowledgment	24

Management of Institutional Change in State Transportation Planning Processes and Programs

■ Introduction

Background

The American Association of State Transportation and Highway Officials (AASHTO) Standing Committee on Planning (SCOP), during one of its peer review sessions, expressed concern about the fact that support for statewide planning seemed to vary from state to state and, in some cases, even within a state at various points in time. SCOP recognized that there were many factors that might require a shift or change in a particular state department of transportation's (DOT) planning process. Furthermore, a state's institutional structure, resources, and experience would affect how the DOT could and should respond. It also was recognized that there are unique circumstances in each state that affect how the state DOT organizes and conducts its statewide planning activities and function. There is no one "right" way to do statewide planning. However, SCOP felt that there may be some lessons and experience in states where the DOT has been able to develop and sustain a strong and effective statewide planning function that could be useful to other states as they attempt to strengthen or preserve their own statewide planning process.

Value of Statewide Planning

Since the basic premise of this research was to provide assistance to state DOT's in developing and sustaining a strong statewide planning function, it is important at the start to identify the value of statewide planning. While the members of SCOP and planning staff in DOT's understand that effective planning is a valuable asset, one of the challenges in developing and sustaining strong planning is communicating and demonstrating this value to a wide variety of audiences. Most of these audiences are not planners and many may have a predisposition to view planning as a somewhat peripheral support activity not central to the core business of delivering statewide transportation services and facilities.

The most significant benefit of effective statewide planning is providing the information to make key program and budget decisions and to explain the consequences of those decisions. By providing a direct linkage from policy to programs and budgets, statewide planning can help to ensure smooth and effective program delivery (both for projects and services) and provide the framework and information to measure and monitor the performance of those programs. Helping to ensure continuity in program delivery is always a key focus of effective planning. In addition, planning can provide guidance on a range of policy issues and help to define the appropriate responses to a whole series of drivers of change that are affecting every state. In addition, the statewide planning process and other planning activities provide a key opportunity for a state DOT to establish and maintain strong partner and customer relationships. These relationships, and the trust developed through them, are also important factors in defining and delivering effective

programs. In short, while meeting federal and state planning regulations is an important and necessary requirement, the impact of effective planning extends far beyond meeting these regulations and includes helping to define the strategic direction and priorities for a DOT.

Objectives and Approach

The first objective of this research was to identify the factors that might require a change in some aspect of a state DOT's statewide planning process. The factors that might drive change, such as a change in political leadership or the appointment of a new chief administrative officer (CAO), were not viewed as inherent threats or risks to an established statewide planning process. Rather, they were viewed as the type of events that most state DOTs will experience at one time or another and, depending on the circumstances within a particular state, they might create a risk to the established statewide planning process. In fact, in some states these factors have led to dramatic fluctuations in the degree of support for statewide planning or the degree of influence that planning has on key policy or resource allocation decisions. In other states, these same factors have created an opportunity for positive change and the development of a strengthened statewide planning capability.

The second objective of the research was to assess how some state DOTs have been successful in responding to these factors that may create a risk to planning and have sustained an effective statewide planning process over a long time period. The identification of those characteristics of a statewide planning process that allow some state DOTs to sustain effective statewide planning may provide guidance to other state DOTs that are attempting to rebuild their statewide planning capability or further strengthen an existing planning process to improve its sustainability over time.

The research approach included the review of recent AASHTO and National Cooperative Highway Research Program (NCHRP) reports dealing with forces driving change within the state DOT community as well as recent conference summary reports focusing on the current status of statewide planning and the emerging issues that the planning process will need to address. However, the most critical element of the research was conducting interviews with selected state DOT planning officials. The state DOTs selected for interviews included some DOTs that have been successful in maintaining a strong statewide planning capability over a long time period as well as some that have experienced fluctuations in the support for planning. Representatives from 11 states were interviewed as part of this project and selected examples from some of these states are included in this report.

The following section of the report describes the types of factors that may require changes in a state DOT's planning process and may create risk to sustaining strong planning. The subsequent section then identifies the characteristics of effective statewide planning. The final section presents some conclusions from the work.

■ Drivers of Change and Risk Factors

There are a wide variety of factors that may drive change within a state DOT and that may require a response in the DOT's statewide transportation planning function and process. Based on the interviews with state DOT planning officials, the extent to which any of these factors pose a threat to developing or sustaining a strong statewide planning function may vary from state to state. For example, in one state a change in the CAO led to the dismantling of the statewide planning group. In another state, a new CAO created an opportunity to rebuild the statewide planning process that had been allowed to decline under a previous administration. Thus, the point in identifying the factors that may drive change within a DOT is not to suggest that they always pose a threat to good planning. Rather identifying these factors helps to define the environment in which statewide planning, whether strong or weak, must operate. Whether a specific factor poses a threat to sustaining good planning in a particular state, often depends on the current strength and influence of the planning function and unique circumstances that may exist within the state. In some extreme cases of course, there may be little that can be done to avoid some decrease in support for planning no matter how strong the planning tradition has been in that state. However, a strong and effective statewide planning process that is sustained over a long period of time will need to be able to deal with a number of these factors successfully.

The types of factors that may drive change and potentially create a risk for sustaining strong statewide planning can be grouped in a number of categories. These categories include:

- Changes in leadership;
- Organizational changes;
- Funding changes;
- New state and federal legislation and regulations;
- Changing role and scope of state DOTs;
- Partner and customer expectations;
- Emerging policy issues.

Within many of these categories, a wide range of specific changes can be identified. The intent here is not to attempt to develop a comprehensive list of specific factors within each category but rather characterize the broad areas that may drive change and to which the planning process will need to respond.

Changes in Leadership

Perhaps the most obvious factor that may drive change within a state DOT and have implications for statewide planning is a change in leadership. In the executive branch, this change could include a new governor, CAO or in some states the chair or composition of a commission that has responsibility for overseeing the DOT. In many cases, there may be changes in more than one of these positions at the same time and, in some states, the changes could extend to the individual assigned the responsibility for statewide planning. The extent to which any changes in the executive leadership creates a risk to planning may

depend on many factors including leadership style, policy agenda, experience with transportation and the DOT, professional background and continuity with the previous leadership. Of these factors, the new leadership's policy agenda and prior knowledge and support for long-term planning are likely to be the issues that have the most impact on the statewide planning process.

A change in legislative leadership or the majority party in power can also have an impact on statewide planning. While the direct influence of the legislature, particularly on the state DOT's budget, varies widely from state to state, the legislature always plays a key role in developing a state's overall policy agenda, fiscal priorities and, of course, statutory and regulatory environment. In states where the legislature plays a direct role in the DOT budget process and the CAO is appointed by the governor, legislative influence and potential impact is greatest. Where a commission oversees the DOT and the DOT budget isn't subject to the same legislative involvement as other agencies, the influence may be weaker and less direct. Beyond the institutional arrangements in a particular state, the extent to which a change in legislative leadership impacts statewide planning may depend on such factors as the policy agenda of the leadership, attitudes toward government in general and transportation in particular. In addition, the legislature's understanding of, and support for, DOT programs and their satisfaction with the amount and quality of the information received on the DOT's programs may also affect the relationship.

Organizational Changes

Internal organizational changes, whether initiated because of a change in leadership or not, often require changes in the statewide transportation function and process as well. Again, depending on the motivation and objective of these changes, they can represent a threat to the stability and effectiveness of the planning process or an opportunity to adjust to a new environment without a loss of effectiveness. In states where the planning process has either been weak or not influential, some organizational changes may be a necessary prerequisite to beginning to build a more effective planning capability.

A recent AASHTO report, "The Changing State DOT," identified a number of areas where state DOTs were initiating major changes in their management and program delivery processes, basic goals and objectives, organizational structure, and relationships with employees, partners and customers. Specific areas identified in the report include:

- Setting new priorities on customer-related missions;
- Use of performance measures;
- Project-focused line organizations;
- Streamlining of administrative processes and quality improvement programs;
- Outsourcing of service production;
- Leveraging of available financing; and
- Integration of best available technology.

The AASHTO report identified the drivers for these types of changes to include a set of factors related to customers, partners, employees, and internal activities. Collectively, the

report suggests that these factors may lead to the evolution of very different state DOTs over the next decade in terms of basic mission, public sector roles, partner relationships, methods of service delivery, financing and organizational structure. While all the implications of these trends on how a state DOT organizes and conducts statewide planning activities is not clear, it is very likely that changes in how statewide planning is conducted, who is involved and how overall state plans and policies are developed will be required. The nature and extent of these changes will vary state to state and how states respond will dictate whether a particular change strengthens or weakens the existing statewide planning process. One example is the trend in some states toward more decentralized structures and decision-making. More focus on regional plans, corridors and building planning capability within regional or district offices has been a trend in many states. Such a trend could lead to more fragmented statewide planning or stronger partner and customer relationships that help forge a statewide consensus.

The AASHTO report suggests a future in which state DOTs will be confronting a series of broad forces or drivers that will require continuous change and improvement in many aspects of a DOT organization, management and work processes including statewide planning. However, in addition to these broad trends, there have been a few particular organizational initiatives that have posed a clear threat to planning in a number of states. Perhaps the most obvious examples are initiatives focused on “down sizing” or “right sizing” a state workforce and emphasizing project delivery and production over “administrative and support” activities. Over 30 states reported in an AASHTO survey that they had undertaken reductions in force since 1990. In a number of states, irrespective of whether the motivation was simply a political agenda or a case of a DOT being unable to deliver on project commitments, the planning function and staff have been targeted for reduced support.

Funding Changes

Changes in funding for a state DOT's programs and activities invariably generate changes within the organization that may have implications for the statewide planning function and process. Interestingly, funding increases, funding decreases or changes in funding eligibility rules, all may require responses in statewide planning and may pose a risk to sustaining an existing statewide planning process. In the case of a funding decrease, the pressures on planning may be similar to the case of a downsizing initiative discussed earlier. The planning function will need to demonstrate its value and compete on a funding priority basis with other functions and activities. In the case of a funding increase, the planning function along with the project development and delivery process will be tested in terms of its ability to deliver a larger program. A broadening of funding eligibility rules, whether accompanied by an overall funding increase or not, may create new demands on the DOT's planning capabilities in terms of the types of policy and investment choice which can now be considered.

New State or Federal Legislation and Regulations

Legislative or regulatory changes at the state or federal level can place new requirements on a DOT's statewide planning function and processes. The capability to respond to these changes and the manner in which new requirements are integrated into the existing

statewide planning process may serve to strengthen that process or highlight a weakness in a state DOT's planning capability. At the state level, there are many examples of legislative or regulatory changes over the past decade which have required changes in statewide planning in particular states. Specific examples include growth management and concurrency requirements, environmental initiatives including system-level impact assessments, economic development targeting programs, shared resource programs with the telecommunications industry, new financing arrangements and changes to programming and priority setting processes or procedures. At the federal level, the Intermodal Surface Transportation Efficiency Act (ISTEA) planning regulations for both state DOTs and Metropolitan Planning Organizations (MPO) have had a dramatic impact in many states. While the implications of the proposed planning regulations implementing Transportation Equity Act for the 21st Century (TEA-21) are not known at this time, it is likely that they will suggest further changes to the statewide planning process. Federal legislation and regulations related to air quality conformity, fiscal constraints in planning and programming, major investment study requirements, and environmental justice have all had significant impacts.

Again the objective here is not to catalog all the types of legislative changes that might impact statewide planning or assess the specific impacts of specific legislation or regulations. Rather, the point is to simply recognize that there is a broad range of potential legislative or regulatory changes that can have a direct impact on statewide planning. Whether a particular change threatens the effectiveness of the planning process in a state will depend on many factors.

Changing Scope and Role of DOTs

Encouraged by both federal and state legislation, the role and scope of activities undertaken by many state DOTs has been changing and evolving over time. In particular, state involvement in intercity rail and transit passenger service, port and airport development, freight and goods movement issues has been increasing. In addition, many states are also playing a role in urban transit at least in terms of funding and the split of responsibilities among state, regional and local agencies has shifted in many states. The new funding flexibility established in ISTEA and continued under TEA-21, even in states where the DOT doesn't have a strong role in other modes, has created a broader range of solutions that can be considered and funded at the corridor and project level. As the encouragement for multimodal and intermodal planning and operations has increased, states must examine how to better integrate what often have been independent and mode-specific planning activities. Similarly, increased concerns about the economic and environmental impacts of transportation at the systems level is requiring some states to get involved in much broader planning issues.

Partner and Customer Expectations

State DOTs and the statewide planning process must deal with a broad range of partners and customers in order to be effective. These partners and customers include local government, tribal governments, regional agencies and MPOs, ports and airports, other public and private sector transportation operators, other state and federal agencies, private sector representatives, a broad set of stakeholder groups and organizations and the general public.

How these various groups are engaged in the statewide planning process is often a key indicator of the effectiveness of a particular state's planning function and process. However, irrespective of how effectively these groups are integrated into the existing statewide planning process, their expectations and concerns can have an impact on that process and potentially the support it receives in other forums like the legislature.

For a variety of reasons the needs and expectations of various constituency groups is changing in many states. Advocacy groups are better organized and expectations for access to the process and an opportunity to influence decisions have increased. In addition, many groups are getting more sophisticated in terms of their understanding of the planning process, how decisions are made, the analytic tools and information generated during system and project planning and the federal and state statutory and regulatory framework within which planning must occur. In addition, transportation needs of different groups are changing and the range of solutions individuals want considered is getting broader and broader. For example, the increasing emphasis on multimodal and intermodal planning may require much more integration of modal planning efforts and ultimately operations as well. Understanding partner and customer concerns and expectations is clearly critical to developing an effective and responsive statewide planning process. If the process is not directly responsive, it is likely that both customer and partner groups will turn to other forums to address their concerns.

Emerging Policy Issues

A number of recent reports and articles, as well as a number of conferences held during 1999, define the range of issues, challenges and research priorities that statewide transportation planning will face in the early part of the new millennium. In many cases, these issues and challenges cut across many of the drivers of change discussed earlier in this paper and will involve new leadership, organizational change, redeployment of both fiscal and staff resources, new legislation and regulation and certainly a continuous effort to build and strengthen relationships with partners and customers.

While the objective is not to develop a comprehensive list of all the emerging issues that will confront statewide planning, a number of sources illustrate the breadth of the agenda and the degree of potential change. In his millennium paper for the Transportation Research Board's (TRB) Committee on Statewide Multimodal Planning, Neil Pedersen, the committee chair, identifies the following current and future issues:

- Performance-based planning;
- Customer-based planning and partnerships;
- Increased focus on management and operations;
- Integrating financial and programming considerations;
- Multimodal and intermodal planning;
- Goods movement planning;
- New technology;
- Environmental issues and sustainability;

- Equity;
- Relationship to other transportation planning processes;
- Development of new technical tools to address new issues;
- Process reengineering; and
- Staff levels and skill mix.

In a recent article in *Transportation Research News*, Michael Meyer also included demographic changes and shifts, global economic forces and pricing to the above list. The issue papers commissioned for TRB's Conference on Refocusing Planning for the 21st Century provided more detailed discussion of the emerging issues in multimodal and intermodal planning, mainstreaming operations and ITS in the planning process, sustainability and land use, environmental justice, access to jobs and linking planning with environmental issues. The research agenda that was generated from this two part conference was, not surprisingly, very broad and ambitious in scope. Finally, the proceedings from the TRB Statewide Transportation Planning Conference in Gridwood Alaska provides more discussion on many of these issues as well.

The conclusion from reviewing all of this material is very clear. The issue agenda for statewide transportation planning is challenging, changing, and unlikely to remain static for long. The breadth of issues, the information requirements, the range of products and processes required to address this agenda will require significant changes to existing statewide planning processes in the future. While it might be expected that a state DOT that has already established a strong and effective statewide planning capability might be best positioned to address new issues, no DOT can afford to be complacent in terms of the demands that some of these issues will place on the planning process. For other states, the changing agenda may create opportunities to begin to build strengthened capabilities to assist decision-makers understand the policy options available and consequences of different choices.

■ Characteristics of Effective Statewide Planning Processes

Given the broad set of factors that in some circumstances may pose a risk to the statewide planning process in some states, the focus of this research was on identifying those characteristics of effective statewide planning that might provide the best defense against an effort to reduce the resources allocated to planning or decrease the influence that the planning function has within the DOT. To address this question a variety of reports, conference summaries and articles were reviewed to identify the state of the practice and best practice. Most importantly, however, interviews were conducted with a selected number of state DOT planning officials. The individual state DOTs selected included a number of states which have been recognized as leaders in defining the state of the practice and which have been able to sustain effective and influential statewide transportation planning processes over a long time period. It also included a number of DOTs that had experienced fluctuations in the support for transportation planning as a result of changes initiated due to some of the risk factors discussed in the previous section. The selected states ranged in size, location in terms of AASHTO regions and included states with significant urban area and issues as well as more rural states.

The objective of the interviews was to identify the characteristics of a statewide planning process that are most likely to develop an effective planning process that can be sustained even in the face of the types of changes discussed in the previous section. No attempt was made to assess or grade the effectiveness of the planning process in each state per se though the DOT officials interviewed were very candid in their observations. Rather what emerged from the interviews were a set of characteristics that were generally thought to be the keys to effective statewide planning. The ability of a particular DOT to develop a process with these characteristics will vary and generally will require strong support from beyond just the planning division to accomplish. There is probably no doubt that it will be easier for a state that has already established a planning process with most or all of these characteristics to maintain it than it will be for a state that is trying to build or strengthen such a process. Nonetheless it is hoped that the identification of these characteristics of effective statewide planning will be useful as a diagnostic tool within a particular state and provide a framework for building a sustainable and effective statewide planning process.

The specific characteristics identified and discussed are:

- Strong linkage between planning and decision-making;
- Two-way education process with a new CAO and elected officials;
- Strong connection to policy objectives and flexibility to address new issues;
- Building strong external partner relationships;
- Effective internal agency communication and teamwork;
- Institutionalizing the planning process in state statutes and regulations;
- Data, analytic tools, and information.

While there was broad agreement among the DOT representatives on most of the characteristics identified, opinions on some varied and the relative importance of different

characteristics varied somewhat state to state. In particular, there was a strong consensus on the first three characteristics listed above as important elements of an effective planning process and necessary to sustain that process over time. Similarly, all the individuals interviewed felt that strong external partner relationships were a key characteristic of effective statewide planning but opinions varied on whether those relationships could help preserve a strong planning capability that was threatened by some other factor. The last three factors were also recognized as important characteristics by most individuals but opinions about their relative importance varied. Generally these differences in opinion could be explained by the particular institutional or organizational environments in the different states.

Strong Linkage Between Planning and Decision-Making

One characteristic of effective statewide planning on which there was a strong consensus and no dissent was the need for the statewide planning process to have a direct impact and influence on decision-making. Planning must demonstrate that it clearly “adds value” by providing information that assists in understanding choices and making decisions. Planning can not be done in a vacuum but must be directly connected to actions that need to be taken. The judgment about whether planning is providing useful information must come from the decision-makers themselves including elected officials. If decision-makers don’t see the “value added” from statewide planning activities, support for planning is at risk. If the perception is that planning is largely done to meet federal requirements, its value will be perceived simply as the cost of doing business to obtain federal funds. Logic and good business practice would suggest that under those circumstances the cost of planning ought to be minimized to just meet, or appear to meet, requirements.

In terms of influencing decision-making there were three general categories of decisions that statewide planning might influence:

- Program and project priorities and budget;
- Specific policy issues; and
- Information clearinghouse for broad range of questions.

By far the first category, influencing programming and project priorities and the budget, was viewed as the most critical area where effective statewide planning must have a direct connection and influence. David Rose, in his evaluation of statewide planning practice for the Gridwood Conference, refers, only somewhat tongue in cheek, to the essential business objectives of a DOT being “meeting the letting schedule” and “utilizing all available federal funds” in the process. While one could define a few broader objectives, the importance of the statewide planning process directly influencing program and project decisions can not be over stated. A key output of effective planning is shaping the DOT’s investment program. One state DOT representative described the current status of the statewide long-range plan as a “shelf process” that reflected a lot of planning activity at the state level but little or no influence on program and project decisions which were made primarily in district offices. Not surprisingly, this individual felt support for planning activities among the senior management team was very weak.

In many states such as Florida and Maryland, the connection between statewide planning and programming is very explicit. For example, in Florida, planning defines the programming policies to be followed and reflects those policies in both its strategic plan and in guidance to districts where much of project selection occurs. For the major intrastate highway system, planning takes the lead in setting priorities. Other states do it differently but the key is an explicit connection between statewide planning and project selection. The connection must be substantive in the sense that the influence on decision-making is clear and it must be perceived as influential as well within the organization. To further emphasize the point that planning activities need to affect resource allocation decisions, Minnesota's organizational chart doesn't identify a "planning" group but rather refers to investment management. Other states have taken similar steps to stress the real objective of planning is to make good program and budget decisions.

The lack of a strong connection between planning and programming in one of the states involved in this research, led to the development of a plan that was not implementable from either a financial or program delivery point of view. The result was an understandable loss of credibility for statewide planning that is still trying to be reversed a number of years later. One DOT representative suggested that the credibility of planning to a large extent depended on a capital program that clearly evolves from that planning. In turn, the credibility of programming depends on delivering the program within reasonable time and budget constraints. As a result, a strong and effective planning process must also be linked with program delivery. A number of states are establishing performance measures as a mechanism to demonstrate the connection and linkage between policy goals, planning, programming, and delivery.

Among the states that have established a strong connection between planning and programming and ultimately program delivery, there is a range of approaches and methods used to establish the linkage. Similarly, there are a range of organizational models and approaches including variations in the degree to which planning and programming are centralized or decentralized in district or regional offices and whether responsibility for both planning and programming is in the same organizational unit. While having responsibility for planning and programming integrated in the same unit is clearly perceived as important and a way to facilitate the connection between plans and programs, there are states where the responsibilities are fragmented but the connection is still strong. In another state, consolidated responsibility for the two functions has not led to a direct connection for other reasons. The key point is the need to have planning directly influence the program not to suggest there is only one organizational model required to do it. In fact, in one state where the responsibilities are integrated and strongly linked, the comment was made that capital programming cannot be the domain of any one organizational unit. To be effective programming requires collaboration across the agency. In still another state, the connection between planning and programming is defined by statute as opposed to organizational roles.

While the connection between statewide planning and programming is the area where it is most important to establish a direct linkage, statewide planning activities and capabilities can influence a range of other decisions and demonstrate "value" as a result. The most obvious area is helping to establish overall agency policy objectives through a strategic planning or policy planning process or helping decision-makers deal with specific policy issues as they come up. Examples include the needs analysis required to support fund

allocation policies among regions within a state, helping to shape a safety program that reflects both transportation facility-related and other factors, developing a economic development program or a position on state involvement in new modes or a variety of mitigation programs. It is often the statewide planning process and function that has the tools, information and data, and skills to organize, assess and communicate the information required to deal with these issues. While demonstrating value in addressing such issues can't substitute for direct influence on program and project decisions it can be another way to link planning to agency decision-making.

Two-Way Education Process With a New CAO and Elected Officials

The arrival of a new CAO, whether accompanied by a change in governor or commission leadership or not, is likely to create some changes within an organization or at least a "period of adjustment." Whether a change in CAO is a risk to sustaining an effective statewide transportation planning process or not will depend on many factors. As discussed earlier, in some cases the arrival of a new CAO may create an opportunity to rebuild and strengthen the planning process and both Alaska and Arizona DOTs provide good examples where this is occurring. There is no question that the development of a strong planning process requires leadership at the executive level and sustaining a strong process over time and over the tenures of a number of CAOs requires that each new CAO understand the need for, and support, that process.

While there may be little that can be done to counteract the agenda of a new CAO who is strongly "anti-planning" in orientation, the states that have been successful at sustaining strong planning processes after a transition from one CAO to another, recognize that the transition to a new CAO requires a careful two-way communication and education process. This education process is particularly important if the CAO does not have any background in transportation or with the specific department; more often the norm than the exception in many states. The communication from the planning function to a new CAO needs to focus on the role and value of planning; in other words "making the case." Key themes that various planning officials mentioned that should be stressed include;

- Role of planning in delivering projects and keeping the project development pipeline full. Making this point and connection persuasive requires that the planning process be directly linked to project selection and budget decisions and that this linkage be real and perceived as such by the other major divisions and functions in the department.
- Ability of planning to define investment needs in a consistent manner and to evaluate investment priorities in terms of policy goals and the limited resources available. This capability will assist the CAO in understanding which investment choices will be most effective and how to monitor that effectiveness over time.
- Capability to address a range of policy choices and issues and particularly issues that may be most important to a new CAO's and/or governor's constituents.
- Institutional knowledge concerning why the Department has made certain investment and policy choices in the past and how some recurring issues have been addressed over time.

- Need to meet various federal and state statutory and regulatory requirements. It is interesting to note that most state officials felt it was very important not to describe the role of statewide planning as primarily a way to meet regulations. However, it was acknowledged that federal and state planning requirements do help to establish the level of resources necessary to sustain an effective statewide planning function.

In making the case for planning, it is interesting to note that some states have chosen to perform statewide planning functions without referring to it as “planning.” Obviously such terms as “investment management” and “program and project delivery” often resonate better with non-planners. The point is not a semantic issue. Few folks will get excited about planning for planning’s sake so making the connection between planning and agency actions, programs and budgets is key to demonstrating value for many individuals who are not trained as planners and who question focusing on long-range issues in the face of the many short-term political and policy issues that must be addressed.

In addition to communicating the role and importance of planning to a new CAO, the other communication that is critical is gaining an understanding of the goals, objectives and policy concerns of the new leadership. The statewide planning process is not neutral with respect to the political and policy objectives of elected officials at all levels of government but rather one forum in which these goals and objectives are reconciled. Understanding the policy agenda of new leadership is essential and the planning process and products of that process must reflect that agenda. One state representative mentioned that, as part of this dialog and two-way communication and education, it is important to stress the ability to provide “quick response” policy advice and information (of course presuming that the capability exists!) and that there will be few real issues that a new CAO confronts that are totally new to the department and which haven’t been addressed to some degree in that past.

An interesting observation made by one state was the desirability of timing key planning cycles, such as a major plan update, with the arrival of a new CAO. This was viewed as a way to both educate the CAO with respect to key transportation issues and make sure a new administration’s policy concerns and priorities are integrated into the department’s plans and programs. Obviously, the timing of CAO departures and the results of elections can’t set the schedule and agenda for many planning activities but at a minimum any direction set under previous leadership needs to be communicated clearly and reconfirmed. Nothing is potentially worse than wrapping up a major planning initiative or plan update just as a new administration is beginning if the political and policy orientation of the administration is very different.

While the discussion above has focused on a change in CAO, some form of a two-way communication process is required for any change in executive or legislative leadership. At the executive level this includes a change in governor or the composition of a commission where that structure is in place. In the legislative arena, it may include a shift in leadership from one party to another or simply a turnover of members. In states with term limits, the legislative education process is becoming a continuous activity.

A final observation that came out of the discussions with state planning representatives was the fact that the degree to which a particular DOT is affected by changes in elected officials in either the executive or legislative branches depends to some extent on the

institutional structure and statutory framework in a particular state. Where the governor appoints the CAO and there is no commission involved, the connection to elected officials is very direct and changes in leadership are felt quickly. Where an appointed commission exists, the commission may buffer the department to some extent from elected officials. Similarly, in states where the legislature has a direct role in approving a DOT budget and where statutory or constitutional funding restrictions are minimal, again the connection to elected officials is very direct and changes in leadership felt immediately. It is interesting to note that in several of the states where the connection to elected officials is most direct and therefore where changes in leadership are felt quickly, the planning officials felt this was a strength and made it easier to develop and sustain a strong and effective statewide planning process. The key point is that effective planning ultimately must be responsive to elected officials. Where the connection to elected officials is very direct, the planning process must be accountable to those officials and there is less risk that the planning process might focus on some interesting issues or exercises that are disconnected to real policy concerns.

Strong Linkage to Policy Objectives and Flexibility to Address New Issues

A key characteristic of strong planning mentioned by most state representatives was a direct and explicit connection to the DOT's policy objectives as determined by elected or appointed officials depending on the institutional structure in a particular state. One planning official described policy planning as the "cornerstone of effective statewide planning" and the way to define priorities at the highest level and to communicate both within and outside the department what is really important. Policy planning, whether it produces a specific policy plan document or not, involves facilitating a process in which elected officials and stakeholders can develop policy goals and priorities. In other words, a process of informing the policy agenda of elected officials that helps to define choices and the consequences of those choices. The ongoing statewide planning process must then take those policy objectives and reflect them in the long-range plan, in programs and in project selection. Without a clear policy framework, statewide plans run the risk of quickly becoming "shelf documents" and it is difficult to connect such plans, and the planning process itself, to programming and project selection.

While developing and sustaining a strong policy planning function as part of a broader statewide planning process may be challenging enough, the fact that policies themselves must reflect the policy agenda of elected officials means that shifts in that agenda, and sometimes rather sudden shifts, must be anticipated and dealt with as a normal part of doing business. In fact, new issues and policy concerns can emerge at any time even without any changes in political leadership. The increasing emphasis on addressing environmental justice and equity concerns is but one relatively recent example that is being felt in many, if not all, states. One planning official described the most fundamental role for planning as the "strategic response to new policy issues as they arise."

In addition to being capable of addressing new policy agendas as leadership changes or new issues emerge, the statewide planning process may also have to be flexible in terms of how policy planning occurs and what the product of the process looks like. For a number of years in the early 1990s, Washington DOT conducted a highly successful and strongly supported policy planning process. It involved key elected officials and stakeholder groups and resulted in an annual policy plan document that summarized key policy

priorities. New legislative leadership in the mid 1990s did not support the previous policy planning process and it was discontinued in that form. As a result the Department integrated a policy planning and service objective process into its system planning activities as a way to continue to get strong policy direction from legislative leaders and others in a way that was now comfortable.

Building Strong External Partner Relationships

A number of planning officials felt that the establishment and maintenance of strong relationships with external partners was a critical factor in being able to develop and sustain a strong statewide planning process. These partners include cities and counties, MPOs and regional planning agencies, ports and airports (where they are not with the DOT), transit operators, other state agencies and a variety of stakeholder and advocacy groups. In many states, good relationships with these external partners were a key to establishing trust and credibility with state and local elected officials. By creating such relationships, a DOT is also creating trust and credibility with the public and the interest groups that have direct connections and communication channels with elected officials and, often, the CAO.

It was also recognized that building strong relationships with external partners takes time and relationships must be built over time by clear two-way communication, providing straight answers even if the message is not what a partner wants to hear and, most importantly, delivering on commitments including project commitments. Obviously, the credibility of the planning process will be jeopardized if good external partner relationships don't also extend to other parts of the DOT. Thus, establishing good relations as part of a planning process also requires follow through with the project delivery process as well.

In Maryland, an annual visit is made to all counties as one element of a strategy for maintaining strong partnerships. The purpose of the meetings is to review the program as well as longer-term planning issues. It is recognized that the meetings themselves are not enough but that the DOT must demonstrate that it has listened by taking specific follow up actions and then proactively monitoring the results. In Arizona, a "rural planning summit meeting" was held to assist smaller communities in developing priorities and communicating needs to be integrated into the statewide plan. Without such assistance, it would be difficult for these communities to participate effectively in statewide planning. In Alaska, a new planning process in the southeast region with significant public involvement was used to develop support for planning and a new regional plan. When legislators, who have to approve projects selected for federal aid, visited the region they heard the same priorities as were reflected in the DOT regional plan. In Montana, legislation creating a new secondary roads planning and funding process was passed without amendment by the legislature after early and extensive cooperation between local officials and the DOT. As a result of this process change, county officials are taking a broader regional perspective on developing and preserving the secondary system.

An organizational strategy that a number of states are using to further develop external partnerships is decentralizing some planning activities and staff. In Florida, Missouri and Washington, and other states as well, the location of planning staff in regional or district offices was mentioned as a key step in establishing better partner relationships and creating stronger communication and working relationships with customers as well. The AASHTO

report, *The Changing State DOT*, documented that 24 of the states responding to a survey had decentralized some functions within the past 10 years.

A wide variety of other strategies are being adopted to improve partner and customer relationships. Many states are undertaking periodic customer satisfaction surveys and creating customer-oriented performance measures or satisfaction indicators. Others are creating additional advisory groups (e.g., freight, enhancements, etc.), using focus groups more frequently and taking advantage of technology and using web sites and the Internet to make more information more accessible.

While developing and maintaining strong external partner relationships was viewed as an important objective for a strong statewide planning process by all states contacted, opinion about the value of these relationships in sustaining a strong statewide planning process varied to some extent. Some state officials felt that good partner relationships were essential to sustaining a strong planning process and that external partners, where good relationships had been established and nurtured over a number of years, would be key allies in supporting the need for strong statewide planning in the face of a threat due either to leadership that was not supportive of planning or budget cuts. In a number of states, both local government, environmental advocacy groups and other stakeholders perceived a strong statewide planning capability in the DOT as very supportive of their goals and objectives. For example, in Alaska, representatives of local communities let their state legislators know that they strongly preferred a new technically based priority setting method to more of a political process favored by many legislators.

In a few other states, good partner relationships were perceived as necessary and important but more likely to be a neutral factor in confronting some threat to continued support for strong statewide planning. Even in these states, however, it was acknowledged that poor external relationships with key partners clearly would hurt an effort to maintain support for statewide planning.

Effective Internal Agency Communication and Teamwork

In parallel with building good external partner relationships is the need to integrate statewide planning within the DOT itself. In a number of states where the planning process was judged to be either weak or in a rebuilding phase, planning was often isolated or perceived to be isolated from other key functions within the Department. In particular, as discussed earlier, if planning is to be linked with programming and budget decisions and clearly influence project selection, there needs to be strong communication and organizational links to engineering and project development activities, finance and budgeting, and operations and project delivery as well. In many departments this means there must also be strong linkages to district or regional offices as well as within a central office.

In states where the responsibility for programming resides within the planning function, it may be easier to establish strong internal communication and support. As described earlier, programming must cut across all functions within a department and this may be one way for planning to influence and have direct communication with all parts of the organization. Similarly, in states which have the resources to maintain a planning capability in district or regional offices, it may be easier to have all parts of the organization understand and support the role of planning in developing and delivering a department's program.

In states where there is not a strong statewide planning capability or the connection to programming is weak, there are likely to be significant barriers between the planning, engineering and operations functions. Overcoming these barriers and creating an organizational structure and environment where planning is integrated effectively into agency operations requires strong organizational leadership. As mentioned earlier, in some states such as Arizona and Alaska, a new CAO has created the opportunity to strengthen planning and integrate it into agency decision-making. In many cases, strengthening planning will require changing the roles of various organizational units in the programming process and educating the engineering and operations functions on the role planning should play in facilitating project development and delivery. Again the organizational trends identified in the AASHTO report may be helpful in supporting this type of organizational change. A wide variety of state DOTs have reported that they have undertaken a range of process improvement and reengineering efforts. A variety of forces may continue to create a climate in which continuous improvement is required and create stronger linkages between statewide planning and other functions. In states that have sustained strong planning capabilities communication and teamwork with other parts of the DOT are strong and the leadership expects such teamwork as a way of doing business.

Institutionalizing the Planning Process in State Statutes and Regulations

In a number of states, the statewide planning process is primarily viewed as a response to federal law and requirements and most recently the planning provisions of ISTEA and TEA-21. In fact, the existence of federal planning requirements was viewed as helpful by many of the state planning officials in making the case for statewide planning. However, if statewide planning is perceived as simply a response to these federal requirements it can be very vulnerable in terms of the resources received and the influence exercised on key policy and program decisions. In many states that have been successful at developing and sustaining strong statewide planning processes, the key objectives for that planning have been reflected in state statutes and regulations that define the need for, and value of, statewide planning from a state, rather than federal, perspective. Depending on the strength and breadth of these state planning statutes and regulations, these state planning requirements can be very strong tools in maintaining support for statewide planning.

In Florida for example, strong legislation exists for requiring statewide planning. State statutes define the requirements for the Florida Transportation Plan in terms of the issues that must be addressed and requirements for public participation. The statutes define both long- and short-term elements for the plan and require that it be updated at least every five years. An annual performance report is also required. Other statutes define program development and budget requirements for the DOT and require consistency with the statewide plan. While federal planning requirements could be used to support many of the same elements defined in state law, the existence of a strong state planning statute makes a much stronger case for planning at the state level and is a mandate from state elected officials to maintain a strong planning process.

In Maryland, state statutes define strong comprehensive planning requirements at the county level that create the need for counties and the state DOT to work closely together. Priorities for major capacity improvement projects must be identified by both the DOT and county government. Both the state legislative delegation and county elected officials must sign off before project studies can begin. In Washington, statutes define key elements

of the statewide planning and programming process and growth management requirements focus on local government create a strong linkage between state and local planning efforts. In Wisconsin, state regulations define requirements for programming and for environmental evaluations of statewide plans. In Alaska, the State Transportation Improvement Program (STIP) process is being put into state regulations.

While it is recognized that statutory and regulatory requirements sometimes can be overly prescriptive and may impede a DOT's ability to focus on the right issues, in states with a strong statutory basis for planning, the advantages outweigh any risks. State planning statutes create a strong linkage to elected officials and help to ensure that a statewide planning process is going to be responsive and accountable to those officials.

Data, Analytic Tools, and Information

Another characteristic of effective statewide planning that can help to sustain a strong planning process is the ability to maintain good data and analytic tools and demonstrate the ability to use that data and tools to inform a wide variety of policy and program decisions. Given a choice, most decision-makers will opt to base decisions on good data and analysis. However, it is critical that the data be credible, reliable and consistent and that the analysis be as transparent as possible to decision-makers. Different sources of data that are either not consistent, or not used consistently, can quickly undermine any effort to inform policy decisions. Also, while planners by their nature like analytic tools and data, the nature of the issues to be addressed and the decisions that need to be made should define the quality of the information required and the need for data and tools.

The types of data and tools required by statewide planning is broad and diverse and includes:

- Demographic and economic conditions and forecasts;
- Land use and economic development patterns;
- Environmental and physical conditions;
- Transportation facility and service inventories and conditions for various modes;
- Asset and service management systems;
- Passenger and freight volumes, flows and forecasts;
- Investment needs and costs; and
- Financial data on federal, state, and other sources of revenue.

The list could go on but the point is simply that good planning requires data and it requires the tools to turn data into useful information for decision-makers. The level of detail and the accuracy required should reflect the type of decision being informed by the analysis.

While the organizational responsibility for collecting and maintaining different types of data and analytic tools varies widely from DOT to DOT, the statewide planning process is a key customer of much of a DOT's enterprise database. Again, no one organizational model is required for a statewide planning process to have access to the data and tools it

needs to be effective but states with strong statewide planning processes acknowledge that good planning is data and analysis intensive. Various enterprise-wide data models and client-server information system architectures are being developed by some DOT's to better manage data and information resources. Both improved efficiency and greater access to one consistent source of information throughout the organization usually are the objectives of such efforts.

Irrespective of where the responsibility resides for collecting and maintaining various data and developing analytic tools, an effective statewide planning process must take advantage of a wide range of data and analytic tools. In fact, the need to rely on different parts of the organization for key data or analytic capabilities can be one way to develop the strong internal communication and teamwork required across organizational functions that is necessary for strong and sustainable statewide planning.

■ Conclusions

There are a wide variety of factors that can affect a DOT's statewide planning process and in some circumstances pose a risk to the sustainability of effective statewide planning. In the face of these factors some states have been able to maintain strong and effective statewide planning, while other states have not. While there is no easy formula for guaranteeing the success of statewide planning efforts, there do appear to be some common characteristics of the statewide planning process in states that have sustained a strong process over time. These characteristics seem to focus on accountability and communication, decision support, partnerships, and reliable data and analytic capabilities. In summary:

Accountability and Communication

- Statewide planning ultimately must be responsive and accountable to elected officials. The stronger and the more direct the linkage is to elected officials the easier it will be to establish accountability.
- Policy planning must explicitly provide the linkage between the policy agenda of elected officials and the other aspects of the DOT's business including the long-range plan, program, operational strategies, the budget and project delivery.
- Changes in leadership in the CAO, commission or in the executive or legislative branches require effective two-way communication. New leaders are likely to have new policy agendas and the statewide planning process needs to have the flexibility to respond to these agendas as they develop. In addition, making the case for and the "value added" provided by statewide planning needs to be an explicit part of a transition strategy with new leaders.
- Establishing explicit performance measures can be an effective tool to demonstrate accountability.

Partnership and Teamwork

- Trust and credibility with external partners and customers is an essential ingredient for effective and sustainable statewide planning. It is probably also the single most important factor in establishing and maintaining trust with elected officials at the statewide level. Strong relationships with external partners take time to develop and require consistency in the approach used to involve them in the process and in communication. Good communication alone is not enough. Commitments need to be met and partners need to hear whether and how their concerns are going to be addressed.
- Within the DOT, the statewide planning function must be integrated into other aspects of the DOT's business including engineering, operations and delivery.

Decision Support

- Effective statewide planning must be directly connected to agency decision-making and be perceived as informing and influencing key decisions. Most importantly,

statewide planning needs to be linked clearly to programming and project selection. Without this connection, it is unlikely that statewide planning will have any significant influence and will be at risk. If the connection between planning and programming is strong, then planning must also be linked to program delivery to maintain credibility and accountability. Again, performance measures may be an effective tool to establish the linkage.

- Statewide planning must also support a wide range of different policy issues that elected officials and the DOT must address. Furthermore, due to changes in leadership and other factors, the statewide planning process must be prepared to deal with a range of different and emerging policy issues at any point in time. The ability to assess policy choices and define the consequences of these choices is a key opportunity for statewide planning to demonstrate value.

Reliable Information

- Effective statewide planning requires reliable data and strong analytic capabilities and an ability to inform policy choices and decisions with effective decision support. In general, this requires that the data and analysis used reflect the nature of the decisions being made and be as transparent (i.e., understandable) to decision-makers as possible.

In states where the planning process has been able to develop the characteristics summarized above, it is clear that effective statewide planning is a key contributor to the effectiveness of the whole organization not just the planning function viewed in isolation. Developing clear accountability to elected officials, responding to the policy agenda of those officials, influencing key program and project decisions and developing and maintaining strong partner relationships all have impacts that cut across the entire DOT. It is also clear that once a strong and effective statewide planning process is established these attributes help it become self sustaining. In addition, many states with effective statewide planning have benefited from a continuity in leadership and staff long enough to establish a tradition of strong planning and the resources to support the function have been available. Finally, individuals leading an effective statewide planning process must have communication, coalition building and political skills in addition to technical skills.

The key products of effective statewide planning mirror the characteristics identified above and include:

- Responsiveness to the concerns of elected officials;
- Good partner relationships based on trust and credibility;
- Direct influence on key policy and program decisions; and
- Flexibility to address emerging issues.

The list could also include many products of a good planning process including policy plans and a policy setting process, a fiscally constrained plan and investment program, etc. but some of these more tangible products are also produced in states where the overall effectiveness and sustainability of planning has not been consistent over time.

In states where there is not as strong a statewide planning process as desired, for whatever reasons, the characteristics of effective statewide planning identified in this paper can help to define some goals and objectives and set a direction for improvement. However, to accomplish significant improvements in the statewide planning process will generally require strong and sustained support from outside the planning function itself and must include the CAO. In that regard, the peer review process established by AASHTO SCOP and TRB's Multimodal Statewide Planning Committee can continue to play a valuable role in supporting the advancement of "best practices" in all states. In addition, there also may be a broader role for AASHTO in defining what CAOs should and can expect from a strong statewide planning capability.

References

1. Lockwood, Stephen C., *The Changing State DOT*, American Association of State Highway and Transportation Officials, Washington, D.C., 1998.
2. Neumann, Lance A., *Integration of Intermodal and Multimodal Considerations in the Planning Process*, prepared for the Transportation Research Board Conference on Refocusing Planning for the 21st Century, Washington, D.C., February 1999.
3. Meyer, Michael D., *Transportation Planning in the 21st Century*, *TR News*, Number 204, September-October 1999, pages 15-22.
4. Pedersen, Neil J., *Multimodal Transportation Planning at the State Level*, *TR News*, Number 205, November-December 1999, pages 4-9.
5. Poister, Theodore H., *Performance Measurement in State Departments of Transportation*, National Cooperative Highway Research Program Synthesis of Highway Practice 238, National Academy Press, Washington, D.C., 1997.
6. Peyrebrune, Henry, *Draft Proceedings of the Conference on Statewide Transportation Planning*, prepared for Transportation Research Board, Gridwood, Alaska, July 21-24, 1999.
7. Transportation Research Board, *Resource Papers 1-3 from the Conference on Refocusing Planning for the 21st Century*, Washington, D.C., February 7-10, 1999.
8. Transportation Research Board, *Resource Papers 4-6 from the Conference on Refocusing Planning for the 21st Century*, Washington, D.C., February 7-10, 1999.
9. Transportation Research Board, *Report from the Conference on Refocusing Planning for the 21st Century: Transportation Technical Planning Research*, Irvine, California, April 25-28, 1999.
10. Federal Highway Administration, Office of Environment and Planning, *Statewide Transportation Planning Training Course*, Washington, D.C.
11. Sarah J. Siwek and Associates, *Statewide Transportation Planning Under ISTEA*, prepared for Federal Highway Administration, Publication No. FHWA-PD-96-026, Washington, D.C.

Acknowledgment

Lance Neumann, President of Cambridge Systematics is the primary author of this paper. He gratefully acknowledges the guidance and contributions made by the Task Review Committee established for this issue paper. The Committee was chaired by Randy Halvorson of Minnesota DOT and included Tom Brigham of Alaska DOT, Kyle Kittrell of Missouri DOT, Sandy Straehl of Montana DOT, and Joanne Walsh of Texas DOT. However, the author alone is responsible for the views and opinions expressed in the paper.