

# A Transportation Executive's Guide to Organizational Improvement



NCHRP Project 20-24 (42)  
"Guidelines for State DOT Quality Management Systems"

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## ***Dedication***

**This guide is dedicated in memory of**

**Richard Harris**

Rich Harris was the retired Director of the Center for Performance Excellence in the Pennsylvania Department of Transportation. Even though retired, Rich kept active in AASHTO projects and was an avid member of the Standing Committee on Quality and a committed member of the Panel for this project. He was devoted to the concept of quality and performance excellence in transportation departments. His initial insights helped to guide this research, and the project lost a valuable asset upon his death in February of 2006. This guide is dedicated to his memory, as it would be his wish that all transportation departments learn from each other and invest in quality practices to better serve their customers.

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Dr. T. J. Brown, Principal of Oasis, was the principal investigator for this project. Other authors of this report include Ruth Hallenbeck, Oasis Principal, Dr. Malcolm Baird, and Caryl Rice, both Senior Consultants with *Oasis Consulting Services*.

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The authors thank all of the 45 responding DOTs and the individuals in those departments who took the time and made the effort to respond to the survey (in Appendix A). An 88% response rate is significant.

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The opinions and conclusions expressed or implied are those of the research agency that performed the research and are not necessarily those of the Transportation Research Board or its sponsors. This document is presented as it was submitted by the authors. This document is not a report of the Transportation Board or of the National Research Council.

# 1. Introduction

## *Purpose and Overview:*

The intent of this research is to assist departments of transportation (DOTs) in identifying and pursuing opportunities for enhancing organizational performance. The research involved asking DOTs, via written surveys and site visits to selected agencies, to describe their organizational improvement programs and practices and to assess the impact of these methods on performance. The information gathered serves to document many specific “best practices” so that any DOT’s desire to benchmark particular areas of interest can be expedited.

The most important purpose of this research, however, is to provide a guide for CEOs and senior leaders to improve organizational performance. To achieve this purpose we searched for common themes among the DOTs that reported the greatest strengths in their approaches to improvement.

Much of this guide is devoted to describing the commonalities that were discovered so that other DOTs can know not only *what* the characteristics of the best practices are, but also *how* the agencies approached the challenges of putting those practices in place.

## *How to Use this Guide:*

This guide is meant to be used as a “toolbox.” Wherever you are in the organization you should be able to find something of value that will help you to improve the organization’s effectiveness. The guide is organized in a way that you can read any section without reading the entire document. However, we suggest that you start by reviewing the common themes, driving forces and summary in Section 2. Then you can decide what areas you are most interested in learning about. The following brief summary of each section will help you decide where to start.



Section 1 provides an historical retrospective of studies and literature. Section 2 identifies the nine common themes discovered among the sites visited and describes those themes along with several of the best practices of these DOTs. This report provides only an overview of these practices. If something whets your appetite and you are interested in learning more about a certain practice, each of the sites has agreed to be responsive to requests for benchmarking. Section 3 provides a “roadmap” that can help you figure out where and how to start improving organizational effectiveness. Section 4 identifies best practices that were beyond the scope of the nine common themes. The tables and the analyses of the survey results in Section 5 will give you further insight into which DOTs are using which tools and practices and further direct you to those states that believe their efforts are contributing to organizational effectiveness. The Appendices include details about the research, the survey, the analysis and the sites visited.

## *Historical Perspective/Literature Review:*



A search of the literature available on the Transportation Research Board's website and a search of relevant articles and websites revealed that many state transportation departments are focusing on customer satisfaction and performance measures. Innovation seems to capture many of the awards that are listed on websites. As has been pointed out before (Research Results Digest, October, 1994), "concern for performance and interest in customers are not new to the public transportation industry." There was much less information, however, on quality practices. The research found some information about employee satisfaction and use of Malcolm Baldrige Quality Award Criteria, but a search of other quality practices, such as Six Sigma and Dashboard, turned up very little.

### *Performance Measures*

Poister (2004) found that state DOT's are very interested in performance measures and "many use performance measures to monitor the implementation of strategic initiatives and track success in achieving strategic goals and objectives." A number of DOTs, such as Texas, Utah, Illinois, and Virginia, utilize a Balanced Scorecard approach (Poister, 2004). Florida DOT developed a comprehensive set of measures of transportation outcomes, FDOT's Mobility Performance Measures Program, to monitor system-wide performance. Baird and Stammer, 2000, found "the most notable of the unique approaches is Minnesota DOT's use of the "Family of Measures" (a variation of the Balanced Scorecard). They also noted Wisconsin's use of "Corporate, Functional and Office/Work Unit" measures.

In 2001 Poister studied "Innovations in Strategic Leadership and Measurement for State DOTs" and found innovation in performance measures in Texas, Pennsylvania, Wisconsin, Maryland, New Mexico, Florida and Kentucky. He found that "the new generation of measurement systems are tied directly to overall strategy." Baird and Stammer, 2000, found that "most of the STA's are not using any particular model or conceptual foundation other than to link their measures to goals and strategies that are identified in the agency's strategic plan..."

The State of Transportation Findings from the TRB's 2004 Field Visit Program indicate that the definition and application of performance measures vary widely across the states, as do the importance and impact of programs to measure performance. Four conditions were identified as critical for the successful implementation of performance measures, noting that in agencies that neglected these conditions the staff is skeptical and performance measures are seen as only the latest buzzword. The report spotlights Ohio DOT as one agency that is committed to performance measures, making clear to staff the role of performance measures in decision-making.

### *Customer Satisfaction*

Turnbull (2004) found that "many states have implemented ongoing customer satisfaction programs," such as the South Dakota DOT, which started tracking customer satisfaction in 1997. Minnesota DOT uses focus groups, stakeholder interviews, and telephone, mail and online surveys to help identify priorities, rank potential projects, gauge interest in proposed policies and obtain feedback (Turnbull, 2004). Wilson-Orndoff (2003) provided details of the

Illinois DOT's efforts to conduct focus groups to solicit customer input. TransTech's handbook for CEOs and Executives on "Strategic Performance Measures for State Departments of Transportation" (2003) combines the issues of customer satisfaction and performance measures. "...most high level performance measures thus focus on factors that determine customer opinions." The handbook cites Louisiana, Minnesota, Florida and Pennsylvania DOTs as examples of states using customer opinions to shape strategic management direction and as performance measures.

### *Other practices*

The literature describes how some DOTs regularly solicit input from their employees with regard to employee satisfaction. Weatherby Gilliland (2001) found that North Dakota DOT conducts an employee satisfaction survey; Florida DOT conducts an annual employee survey and follows up with employee teams on subjects indicated by survey results. Cluett and Baker (2001) describe South Dakota DOT's organizational health initiative that involves focus groups and surveys with employees to incorporate their needs and opinions into DOT decision-making and programs.

Weatherby Gilliland (2001) also points out that Pennsylvania DOT adopted the Baldrige National Quality Award criteria, specifically Category 5.0, Human Resource Focus. Stringham (2004) reviews the impact of Pennsylvania DOT's twenty-year experience with its quality improvement program and states "the most important aspect of PENNDOT's quality program has been the integration and synergy derived from its strategic management system." At the Summer 2004 Management and Productivity Conference in Woods Hole, MA, the former Secretary of New Mexico's State Highway Department spoke about the positive changes in New Mexico and an emphasis on the Malcolm Baldrige quality principles. A review of agendas for the TRB 2004 Annual Meeting and the Second National Conference on Performance Measures to Improve Transportation cited presentations by Virginia DOT on Virginia Project Dashboard, which provides a watch list and report card on all contracts, and Caltrans, for their Performance Measurement approach.

Two of thirteen "Making A Difference" awards presented by the National Partnership for Highway Quality in 2004 were for the category of State Quality Initiatives. These went to Texas for their LINC Program (Learning, Information, Networking and Collaboration) and Virginia for their Construction Quality Improvement Program (CQIP).

A review of the Baldrige website provided a list of 26 states with quality award programs. These programs, generally operated by a nonprofit entity, focus on spreading the use of quality management practices, based upon the Baldrige criteria, throughout the state. A spot check of nine of the 26 state DOT websites mentioned on the Baldrige list revealed two sites with a direct mention of quality efforts underway: Ohio and New Mexico. The Ohio site mentioned that all 12 of their districts and the central office have achieved various levels of Baldrige recognition. New Mexico talks about their Quality Brown Bag lunches and improvement measures.

### *Conclusion and Rationale for Survey and Site Visit Research:*

We reviewed over 40 documents and articles and a dozen websites. The literature search was thorough but not exhaustive and shed light on some common and some best practices, particularly in the area of performance measures.

We believed, however, that more was happening in DOTs than this literature search revealed. Personal experience indicated that many DOTs were doing things that might not be referred to as “quality” practices but that were comprehensive approaches to organizational effectiveness. For that reason, the approach to this study inquired about best practices in organizational improvement instead of specifically asking about “quality” practices. The stated purpose of the survey was to document the “Organizational Improvement Programs and Practices being used, and the perceived impact on performance.” Although it was organized by the Baldrige categories, the survey asked respondents to identify any and all programs, practices and tools that they were using successfully for purposes of organizational effectiveness.

In addition, we also scanned current best-selling business books to determine whether and how any of the self-proclaimed wisdom of the popular literature about creating “excellent” organizations could be substantiated by demonstrated practices in DOTs.

### *Findings*

The following chapters detail our findings and show that the transportation agencies proactively pursuing organizational excellence were, in fact, using various approaches consistent with what has in the past been referred to as “quality principles.” Most identified best practices in each of the seven Baldrige categories on the survey. Our hypothesis that many states do not use “quality” in describing their organizational programs and practices was also true. One of the notable discoveries was that the best organizations create a program that is homegrown and so is not perceived as imported or as “flavor of the month.” What they are doing is often referred to as “just good business.” The research also found that there is indeed a correlation between many of the approaches espoused in the business books and what was observed as best practices in the visited DOTs.

## 2. BEST PRACTICES

The survey of organizational improvement practices was sent to the 50 state DOTs and the District of Columbia. From the 45 responding DOTs, the ten that reported the greatest use and benefit from their practices were selected for site visit. Appendix C explains the selection criteria and method, which resulted in visits to the following DOTs:

- Arizona
- Florida
- Illinois
- Maryland
- Missouri
- Ohio
- New Jersey
- New Mexico
- North Dakota
- Virginia

This section reports the findings and conclusions of the site visits.

### *Findings*

#### **Common Themes**

Site visits to the ten selected transportation departments revealed the following nine common themes, or key success factors, that contributed to overall organizational improvement and effectiveness.

-  LEGACY LEADERSHIP
-  CHAMPIONS
-  MEASURES OF SUCCESS
-  DESIRE TO LOOK IN THE MIRROR
-  ALIGNMENT
-  DIALOGUE
-  TAKING CARE OF BUSINESS
-  A CULTURE OF KAIZEN
-  EMPOWERMENT WITH ACCOUNTABILITY

**Legacy Leadership.** It should come as no surprise that leadership is a major theme. The type of leadership observed was similar to what best-selling author, Jim Collins, discovered in his extensive research to define characteristics of organizations that become great (described in his best-selling book, *Good to Great* and monograph, *Good to Great and the Social Sectors*). In fact, in two of the agencies visited, the leadership cited Collins’ writings as significantly influencing their approach. Our research generally supported Collins’ findings that good-to-great leaders are “a paradoxical blend of humility and professional will,” and many of the observed leaders also fit the description of “servant leaders,” or stewards of the organization’s resources, as suggested by other best-selling authors, most notably Robert Greenleaf. The type of leadership found in these DOTs is defined here as “Legacy Leadership” because the leaders interviewed were more concerned about leaving an organization that would continue to be successful than they were about personal gain.

**Champions.** CEOs need credibility in their organization to create positive change. Some of the agencies visited had CEOs who came up the ranks from within and this gave them

automatic credibility. Others were brought in from the outside specifically to bring a fresh perspective. Regardless of where they came from, these CEO's cultivated one or more "champions," high-level, *internal* career people, to facilitate their efforts and act as advisors and advocates on organizational performance issues. Champions are astute career professionals who have gained the respect of others, and have credibility for their understanding of the work and the culture.

**Measures of Success.** Each of the ten states visited has very clear answers to the following questions:

- How do we know if we are successful?
- How do others judge our performance?

They have invested in systems to measure and report on their performance. The measurement and reporting systems have contributed to organizational excellence in many ways. They spotlight the organization's priorities, help monitor progress toward success, help identify strengths and weaknesses, and support more fact-based decision-making. Those systems also promote accountability, for the department and for units and individuals within the department. Measuring and reporting on performance has also increased the departments' credibility with key stakeholders and has been instrumental in the approval of important initiatives.

**Desire to Look in the Mirror.** All of the organizations visited conduct some sort of self-assessment. Many use the Baldrige criteria to assess organizational effectiveness, but whatever instrument or process they use, all have ways of holding up the mirror to assess their effectiveness and to find areas for improvement. In addition to organizational assessment, these organizations assess both customer and employee satisfaction. This is done in different ways. For example, many use telephone polls to assess customer satisfaction. Employee surveys are typically done through the use of an anonymous survey that all employees are invited to complete. These organizations also benchmarked others to learn of best practices, took the best of the best, and adapted it for their own use.

**Alignment.** Another shared attribute of these organizations is an emphasis on alignment, internally and externally, to ensure that every program and every unit within the department is optimally using its resources to accomplish the department's priorities. The DOT leadership makes a concerted effort to build alignment with the current administration as well as with employees in order to accomplish the mission and goals. These DOTs also display an enthusiasm and a pride in doing so and, as Collins discovered, saw that "under the right conditions, the problems of commitment, alignment, motivation...largely melt away."

**Dialogue.** Each of the organizations visited have strong systems in place for communication and outreach. The leaders and managers pay careful attention to communicating and sharing information. Equally important, they are deliberate in creating feedback loops that allows opportunities for employees and stakeholders alike to provide input that is welcomed and carefully considered. These organizations use multiple media to accomplish this dialogue and approach stakeholder relationships with a collaborative mindset.

**Taking Care of Business.** In different ways, each organization is very focused on accomplishing its strategic goals. Most have dynamic strategic or business plans, but the key

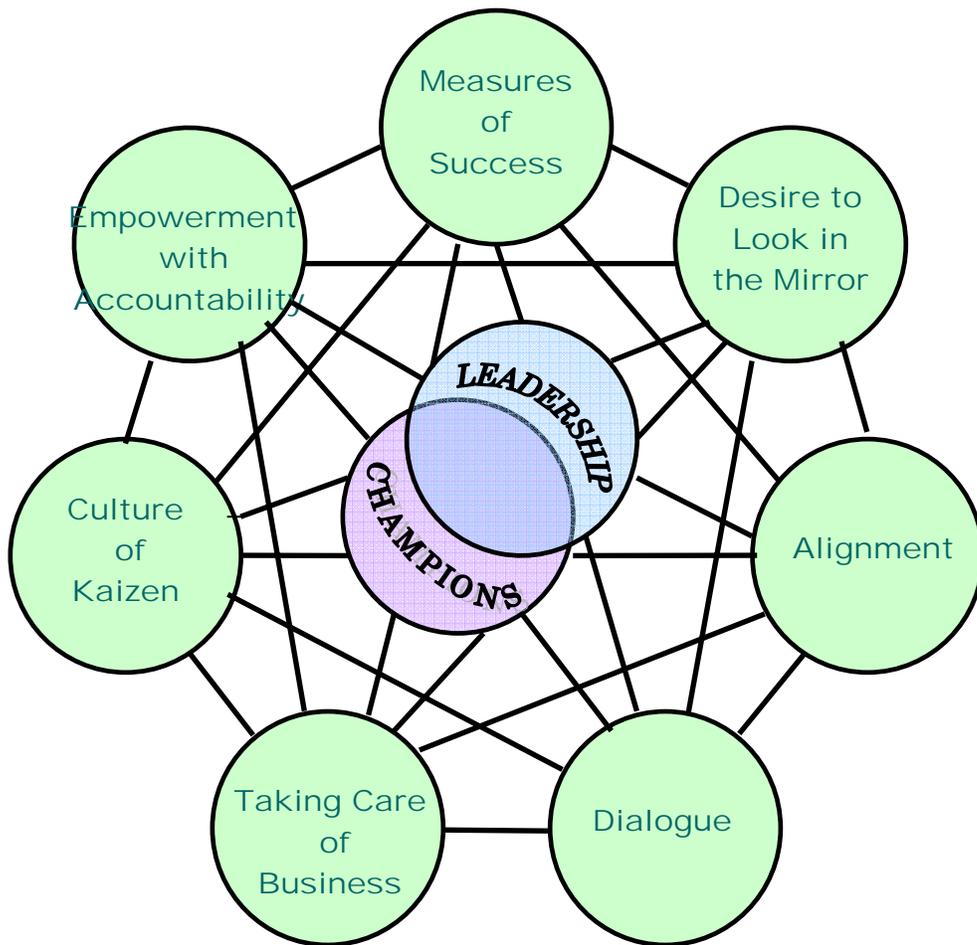
discerning factor is a focus that is proactive, balances long term with short-term, and is drilled down throughout the organization. Focus and action are the keys in this theme. Many organizations have a laundry list of high-sounding strategic goals, but the organizations visited are very focused on key areas. For example, New Mexico DOT has four strategic priorities; Ohio DOT has five strategic initiatives for 2006-07. Florida DOT currently has 11 Key Performance Areas and is in the process of collapsing them to five. Some of the organizations are still in the beginning stages of accomplishing this, but they are on the path to do so. As Secretary Stutler, Florida DOT Secretary, said, “I am excited about the connectivity between the mission and individual tasks...people having a sense of ownership and a sense of purpose...”

Another key learning from this research is that these organizations deliberately did away with any programmatic title that could be perceived as “flavor of the month,” or the “current administration’s way of doing things.” While some had a name for what they were doing, such as Maryland’s “Performance Excellence,” and New Mexico’s “Good to Great,” these were motivating themes to pull people together toward a common goal, rather than an imported program. When asked about whether these phrases represented any formally documented programs, the response was most often, “No, this is just good business”.

**A Culture of Kaizen.** Kaizen is a philosophy of continuous improvement. In Japan, which is where it originated, it means change (kai) to become good (zen). Its strategy calls for never-ending efforts for improvement, involving everyone in the organization, managers and workers alike. In the organizations researched, there is a culture of Kaizen. The transportation needs and constraints of today are very different than what transportation agencies faced in the past. The visited organizations seemed determined to be as successful in dealing with the new circumstances as their predecessors were in designing and building the national highway system. It seemed common practice to continually look for ways to improve. New Mexico DOT, for example, has a “Whatever It Takes Best Practices Program” that rewards innovations that employees create to improve quality of life for them and for the customer.

**Empowerment with Accountability.** Clear expectations are a key to success. Employees who know what is expected of them are more able to achieve success. When they are also empowered to determine the best path to meet customer needs, they work hard to make the organization successful. In the organizations visited, employees take pride in meeting and exceeding goals and improving practices and processes. They are empowered to do that and are held accountable for meeting their goals and objectives. For example, Ohio DOT has daily performance measures for every individual that align with specific system goals. According to Director Proctor in Ohio, you can “Ask anyone and they know what they are responsible for.”

The following model depicts these nine factors as interrelated and interactive. It is both the sum of these parts and, equally important, the interactions between them, that characterize the DOTs reporting the most strengths and greatest success in organizational improvement.



## Driving Forces

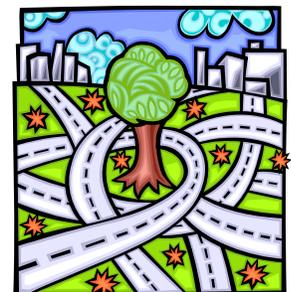
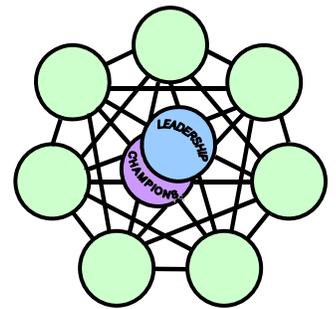
There were several forces these transportation agencies cited for investing in improving organizational effectiveness.

- In half of the agencies visited, the trend toward total quality management initiatives in the late 80's and early 90's evolved into a systemic approach to organizational effectiveness, often lasting through one or more CEOs and continually viewed as good business.
- In two cases, outside pressures to correct perceived problems were a major reason, such as outcry from the public and political leaders around construction delays, budget overruns, and unfulfilled promises.
- Customer service, which has long been a focus for transportation departments, became even more important as customers became more demanding of public servants.
- Dwindling sources of funding and increasing costs of doing business are forcing transportation agencies to look at new ways of doing things.
- Increased demand for accountability from state legislatures and interest groups.
- Focus at the federal level -- AASHTO, NCHRP, FHWA, Committees, etc. -- on best practices and benchmarking.

## Summary

The nine themes identified and elaborated upon here were common among the agencies visited. Not all of the nine themes were present in the same degree in all of the agencies, but in every case there was evidence of each theme. The model we developed depicts the themes as an atom because of the interaction and synergistic nature of their relationship to each other. Together, the themes create a dynamic state in which combined action demonstrates more favorable results than the sum of individual component actions. Any action by one affects the others. For example, *Taking Care of Business* refers to focus on strategic priorities. This affects, or is affected by, *Measures of Success*, a *Desire to Look in the Mirror*, *Alignment*, *Dialogue*, *Leadership*, and *Champions*.

There are many paths to organizational effectiveness. Even though the organizations visited had these themes in common, they had different approaches. No single formula for success was identified. Therefore, the good news for those beginning the journey to organizational effectiveness is that many paths lead to Rome. The interviewed agencies benchmarked lessons and best practices from others and made them their own. This guide offers tips and lessons-learned to be shared for each of the themes, and these suggestions can be customized for any



transportation agency. The challenging implication, however, is that if any one of the themes is weak or absent, the overall effort may be seriously jeopardized.

### DOT Organizational Effectiveness

<p><b>IS NOT</b> A Single, Accepted Model Imported Called 'Quality'</p>	<p><b>IS</b> Eclectic 'Home Grown' 'Good Business Sense'</p>
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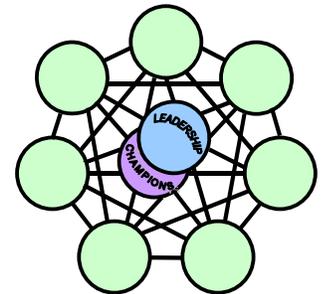
Most of the agencies interviewed have strategically NOT given a “title” to what they are doing to improve organizational effectiveness. While a number of these initiatives were rooted in the Total Quality Management movement, their approach has evolved. Most indicated that what they are doing just makes good business sense. Some have given it a “mantra” which is used more as a motivator. For example, New Mexico DOT uses “Good To Great” as a theme that people, employees and stakeholders alike, can rally behind. This phrase, however, is used as a shorthand term for the approach they are crafting for their own agency, rather than representing a formal model such as TQM or Baldrige that is being imported and applied.

In summary, while there are many different ways to approach organizational effectiveness, the agencies visited understand that organizations are dynamic and complex, so it is necessary to use a systemic approach, creating several interdependent conditions for success. The synergy created by their interaction is as important to overall success as the contribution that each makes independently, which is why we chose the metaphor of an atomic structure to depict the themes.

We have also described them as common themes because their nature is quite similar across the agencies, although the specific ways in which each agency created them were myriad. In the remainder of this section, therefore, the key characteristics of each theme are described along with several examples of the varying practices that the agencies used.

**“The CEO can practice Baldrige and move the organization forward through his or her behavior and use of time without a formal program.”**

*- Pete Rahn, Missouri DOT Director*



## TIP

When asked what advice he might offer to new CEO's, Florida DOT Secretary Denver Stutler, humbly offered the following:

- “Step back and look at the play from the bleachers. Keep perspective and look at the big picture.
- Care about people and you will affect them.
- Everyone reacts to how the CEO reacts and we should be mindful of that. Stay calm, let outrage be the exception, not the norm.
- DOT relies on partnerships. Understanding partnerships is very important and is about relationships.”

*“Be the change that you want to see in the world.”*

Mohandas K. Gandhi

## *Tools and Tips for Implementing Best Practices*

### **Legacy Leadership**

- Legacy leaders demonstrate a dynamic commitment to make the organization great. Some may not say that it was their goal to make the organization “great”, but they have a commitment and a resolve to make the organization more successful, more effective, and one where employees want to come to work.
- Legacy leaders are more interested in the organization’s success than in their own personal gain or renown. They have, as Collins learned, a “paradoxical blend of humility and professional will.” *Secretary Denver Stutler, Florida DOT, stated “I don’t think I know everything. Anything that any of my predecessors had ordained, I would require myself to go through a very thoughtful process before changing. Change is only in the best interests of the team and the organization...In getting it right, I sometimes have to admit I’m wrong.”*
- Legacy leaders see over the horizon. They know where they want to take the organization and the specific results they want to accomplish, even if they didn’t quite know how to do it at first.
- Legacy leaders are committed to creating an effective organization that will be sustained even when they are gone. They have given thought to the next generation, what it requires to sustain the organization they are building, and to setting their successors up for success. *As Director Gordon Proctor in Ohio stated, “This is now so engrained in the way we do business, it would be almost impossible for this organization to move away from daily measures. People won’t know how to work without measures of success.”*
- Legacy leaders are visible. They reach out to their employees, to the community and to stakeholders and use a collaborative approach to accomplish desired goals.
- Legacy leaders are committed to and confident in their ability to create positive change. They are willing to try new things.
- Legacy leaders are results oriented. They are committed to the implementation of performance measures and communicate that commitment effectively to all employees.

*“I suspect we will find more true leadership in the social sectors than the business sector. How can I say that? Because...the practice of leadership is not the same as the exercise of power.”*

*Jim Collins, Good to Great and the Social Sectors*

- Legacy leaders “walk the talk.” They demonstrate a consistency of message and a constancy of purpose. As *Director Sprynczynatyk of North Dakota* said, “*Communication is the key. Walk the talk. Help people believe that you believe.*”
- Legacy leaders are mission driven and vision focused. The organization has a purpose that drives strategic goals and there is a shared vision of a desired state.
- In his research for the book, *Good to Great*, Jim Collins found that the leaders who built organizations to last were “modest, self-effacing and understated and they attribute success to factors other than themselves”. Our research underscored this finding.

Leaders who built organizations to last were “modest, self-effacing and understated, and they attribute success to factors other than themselves.”  
 Jim Collins,  
*Good to Great*

## Legacy Leaders

- Have a clear picture of their desired state
- Are mission driven and vision focused
- Demonstrate commitment
- Believe organization's success is most important
- Are results oriented
- Set successors up for success
- Reach out to all stakeholders using a collaborative approach
- Try new things

### TIP

*Suggested reading:*

- *Good To Great, Why Some Companies Make the Leap...and Others Don't.* Jim Collins, 2001, HarperCollins Publishers
- *Good to Great and the Social Sectors, a Monograph to Accompany Good to Great.* Jim Collins, 2005.

## Champions

In his 1996 book, *Leading Change*, John P. Kotter examines the efforts of more than 100 companies to remake themselves. He offers a process to overcome barriers to leading change. One of the steps in the process is to “create the guiding coalition.” In the transportation agencies visited, there was a concentrated effort to cultivate “champions” to help affect positive organizational improvement. Kotter would likely call these champions a guiding coalition and offers four questions to consider when creating one.

- Are there enough of the right individuals with the skills and influence to affect change?
- Do they have the necessary level and diversity of expertise?
- Do they possess the credibility to influence the organization?
- Does the group include enough respected leaders to lead the change process?

The champions we observed met the criteria raised in these questions. Sometimes it was the Executive Team and sometimes it was different people performing a range of functions, but they were effective, credible, and astute career employees acting as the champions for the CEO on organizational performance issues.

In most cases, these champions, or guiding coalitions, were not identified as such, nor was that role specifically defined. However, the charge to share the vision, help others see how it could be accomplished, and create opportunities for feedback were clear and strategic.

**“One strong leader cannot make change happen, and therefore, it is his responsibility to build such a strong composition of people that can lead the change as a team.”**

- John P. Kotter, *Leading Change*

For example, **New Mexico DOT** has cultivated the champion role in many different ways. The first way, and one that is a best practice to be benchmarked, is the role of a “Quality Coordinator.” The Quality Coordinator is housed in the Quality Office and supports organizational effectiveness initiatives, BUT spends 60% of his time in the field selling the vision, helping people see how they can achieve the vision, seeking out best practices to recognize, asking people what they need to do their jobs better, and telling people they are appreciated. NMDOT has also established Quality Managers in each District. Quality Managers report to the District Engineer but also work with the Quality Coordinator to support the organization’s “Good to Great” strategic priorities (identified in their Good to Great Strategic Plan). In addition, the Office of Quality Management supports and adds to this role.

### *Common Characteristics of Champions:*

- Ability to influence
- Expertise
- Credible
- Respected

### **“Quality Coordinator”**

In New Mexico DOT the Quality Coordinator plays a key role in organizational improvement efforts, spending 60% of his time in the field.

Most of the agencies visited had an organizational unit, such as New Mexico's Office of Quality Management that played a critical role in improving organizational performance. The Organizational Results Office in MoDOT, the Partnering Office in ADOT, the Management Service Office in VDOT, MDSHA Performance Excellence Unit, and the ODOT Office of Quality and Organizational Development, are but a few. These offices had clear roles and responsibilities, but it was not their responsibility alone to serve up organizational improvement. Their efforts were integrated with everything else in the organization. This supports the findings that organizational effectiveness needs a systemic approach.

Most agencies had an organizational unit that played a critical role in improving organizational performance.

**TIP**

*Suggested Reading:*

*Leading Change.* John P. Kotter, Harvard Business School Press, 1996

## Measures of Success

A key ingredient in the success of these state departments of transportation is the substantial and effective use of performance measures. All of the agencies visited seek to measure and report on organizational performance as well as on the performance of their respective transportation systems. These departments want to know how well they are doing and want to quantify that information for their stakeholders. Defining success and crafting measures to gauge progress was also among the earliest steps taken by all the DOTs in their respective organizational improvement initiatives.

State DOTs and other government agencies have given considerable attention to performance measurement in recent years, and many studies and recommendations are available to guide DOTs in the development of performance measures and measurement programs. Not surprisingly, similarities were found in the way the ten states measure and report their success. However, differences were also found among them, with most of the differences in response to unique needs and objectives.

**Similarities.** The similarities include meeting all of the conditions suggested in the *State of Transportation: Findings from the TRB's 2004 Field Visit Program* as critical for the successful implementation of performance measures:

1. They must be understandable and useful to staff and decision makers;
2. Agency staff and decision makers must work together to select and define the performance measures;
3. Top leadership must be committed to the implementation of the performance measures and must communicate the commitment effectively to all employees; and
4. The data that are gathered must be used, and employees must know how the data are being used.

Also, all of the visited departments are using measures that recognize different perspectives and different ways of defining “success”— from the perspectives of customers, elected officials, the general public, employees, and others with a stake in the DOT’s success. All of these departments seem to believe that measures have to reach beyond standards that make sense to transportation planners and engineers and be expressed in meaningful terms for their stakeholders.

One of the key reasons for measuring performance is to be more accountable, and part of that accountability is to share current performance information without restriction. For most of the visited states, extensive performance information is easily accessible on the

## Why Measure?

- Focus on priorities
- Know how well you are doing
- Understand strengths and improvements needed
- Support fact-based decision-making
- Clarify expectations
- Increase internal and external accountability
- Gain credibility
- Build support for new initiatives
- Assure legislative support

departmental website. Virginia DOT's Dashboard and Missouri DOT's Tracker are featured on their respective home pages. New Mexico DOT publishes a comprehensive quarterly report (*Good to Great Strategic Plan and Performance Report*) with data, narrative, graphics, and color photographs, and the entire report or individual sections can be downloaded from its website. Arizona DOT presents monthly "Key Measure Charts" for the department, and extensive detail is available for numerous Division Performance Measures.

Another often cited reason for investing in performance measurement is to demonstrate progress and increase credibility or, conversely, to demonstrate the lack of progress because of lack of resources. Several of the states offered examples of how performance measurement and reporting helped their department gain support for budgets and for other funding and legislative initiatives. Being able to demonstrate results can be instrumental in achieving major advancements, and recent examples were found in Virginia, Ohio, Maryland, Missouri, New Mexico and New Jersey. Strategic plans, business plans, budgets, new programs and priorities, and other appeals were more credible and gained support more easily because the stakeholders could see results. In other cases the data helped explain why goals could not be met and led to an increase in resources to support achievement of the goals.

**Differences.** Even though all of the ten states point to performance measurements as necessary for a high level of organizational performance, several differences can be cited in the way those states measure and report their results. The primary reasons given for measuring and reporting are not all the same. The methods of establishing measures and of collecting and reporting information are not the same. Some of the departments are influenced by requirements or guidelines that apply to all state agencies. Other departments are measuring and reporting on their successes independent of other state agencies. However, most of these differences are attributable to unique circumstances and priorities, and each state seems to have developed a program that is effective and workable under the prevailing circumstances in their department.

The most significant differences among the ten states revolve around the maturity of implementation and the extent to which the measurement system addresses the day-to-day operations of individual units. Those DOTs that have more experience with performance measures seem to be further along in linking departmental priorities and measures to unit and even individual performance objectives.

Measures must  
always in a  
progressive  
society be held  
superior to men,  
who are after all  
imperfect  
instruments,  
working for their  
fulfillment.  
**Mohandas Gandhi**

*Even though  
measures were a  
common theme,  
there were  
differences in  
approach among  
the sites.*

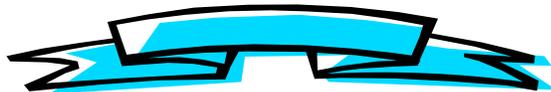
## *Linking Department Goals with Day-to-Day Performance*

**Ohio DOT** has raised the bar in this respect. Every ODOT employee comes to work each day knowing what is expected of him or her and how to measure success. Measures are continually monitored and benchmarked against other ODOT units and other transportation agencies to promote continuous improvement. There is a clear link between long-term goals and daily performance measures. *ODOT Director Proctor asks, “Do you know what it costs for every hour you don’t plan well? ODOT employees know what’s expected so they can go directly to work and not wait for the county manager to tell them what to do each day. Ask anyone and they know what they are responsible for.”*

The **Maryland State Highway Administration** uses a “catch-ball” approach to establish objectives. There is back-and-forth communication in which the senior leadership establishes broad goals and then the districts, office and teams identify objectives that are in line with the department’s goals.

**Florida DOT** has a “tiered” approach and, when completed in April 2007, the system will eventually include objectives and measures for all employees. Those individual measures will be strategically linked to unit and departmental goals.

*Brief summaries are offered below to highlight some additional lessons learned or unique aspects of Measures of Success in individual states.*



 **Arizona DOT**’s performance measures are products of its strategic planning process and reflect a combined “top down” and “bottom up” approach. The department has identified 13 “Key Measures,” selected from among hundreds of unit measures. These Key Measures are displayed on ADOT’s website. Each division in ADOT is encouraged to develop its own measures and to use the measurement and reporting system to improve critical aspects of the division’s performance. ADOT’s Motor Vehicle Division has perhaps the most advanced system seen in any of the states, including data and narrative for more than 200 measures that are reported monthly. These reports are also available on the department’s website.

 **Florida DOT** had 11 Key Performance Measures (KPMs) for the department, now collapsed to five. These measures serve as the

*Ohio DOT: “From Strategic Planning to Daily Action”*



"dashboard" for the department's senior leaders. While there are thousands of individual measures to monitor processes in the department, the dashboard shows those measures of the department's performance essential to determining how well the agency is functioning. Measures are built into its Tiered Business Plan (See *Taking Care of Business* for details). Currently there are basic indicator measures and activity measures and they are beginning to focus on "outcomes" or results measures.

To effectively manage the data and analyze performance, the Executive Board utilizes the department's new information and analysis system, Panorama Business Views, or PBViews for short. PBViews software is used to track and monitor key measures. The first measures entered in the system are the 11 Key Performance Measures (KPMs) and eight Strategic Objectives. Statewide champions are appointed for each Strategic Objective. This performance management software will be used statewide to report all the key performance measures of the department and for local tracking, reporting and analysis.

 **Illinois DOT**, since 1999, has conducted strategic planning and performance measurement using a balanced scorecard approach that focused on customers, programs, processes, and employee development and training. In a balanced scorecard approach they first design their strategic initiatives and goals around the needs of customers, the programs for which they are responsible, the processes they manage, and their human resource development needs. Then they measure, in the same categories against the goals they set. They involved staff in the process almost one by one at all levels of the organization, meeting with groups of 20 in all of the districts. They established fifteen objectives for the overall plan that was then drilled down into the divisions and districts. Through the process of including all employees they captured organizational knowledge from senior employees prior to a retirement buy-out.

 The **Maryland State Highway Administration (MDSHA)** has six Key Performance Area (KPA) Councils that establish measurable objectives as part of the agency's Business Plan. The councils monitor achievement targets. All senior managers are assigned to a council. Two senior managers lead each council and are held accountable for the results. They meet throughout the year and review quarterly progress in leadership meetings on a rotating schedule. The Business Plan process includes a component that is built from the bottom up so that individual offices can focus on measures that are important to them. The process gives the organization a strategic focus and helps keep priorities front-and-center.

*"Create a system that is easier to move forward with than to move back."*

**John Webber, Assistant to the Secretary for Strategic Planning, Illinois DOT**

Illinois DOT uses a Balanced Scorecard approach to design and measure their mission, vision, quality policy and objectives around:

**Customers  
Programs  
Processes  
Human Resources**

MDSHA has a management tracking system (Access database) that houses quarterly performance results for each Business Plan objective. Some databases that track individual work activities have been modified to reflect these performance areas. For example, SHA used to track that a maintenance worker “mowed 8 hours.” Now s/he has to have units of work, such as “Specifically, how much did you mow?” Teams can track performance quarterly and if they don’t make their goals they discuss as a team. This creates ownership.

**TIP**

**“Measure outcomes instead of outputs.”**

*Neil Pederson, Administrator, MDSHA*

✚ The **Missouri DOT Tracker** is relatively new. A lesson for other states is that MoDOT moved from concept to implementation in just a few months, posting information on its website knowing that some of the measures might need to be modified or might even prove unworkable. When asked about the risks of moving forward so quickly with information that might be used to criticize the department, Pete Rahn, MoDOT’s Director, responded: “We would rather be 9-1, than 1-0.” In fact, MoDOT managers could not recall any negative consequences from moving so quickly, and the Tracker was cited as a model for other state agencies in the *Report and Recommendation of the 2005 Missouri State Government Review Commission*.

✚ **Ohio DOT** has probably one of the most sophisticated approaches to measures of success of any state agency, not just transportation agencies. ODOT has 67 OPIs (Organizational Performance Indicators) that relate to five two-year strategic initiatives for 2006-07. These are part of ten-year goals that link to ODOT’s long-range plan and also to annual performance evaluations.

It is an understatement when ODOT says it is data driven in its decision-making. It is a performance measure-driven agency which uses short term performance objectives as interim milestones to reach biennial and decennial goals. Right down to the county operations, commonly understood performance measures are used to define the success of programs. All parts of the organization have OPIs which are attached to various strategic initiatives and aligned toward the successful achievement of the agency’s goals and strategic objectives. OPI measures are published quarterly so that everyone knows how they are performing.

“Performance measurement is not a new idea. When legendary NYC wonder-Mayor Fiorello LaGuardia was looking for a public health director back in the 1930s...he gathered up public health statistics from major cities around the country, and then he went after the guy with the best numbers. Period.

*From “Measuring Up, Governing’s Guide to Performance Measurement for Geniuses (and Other Public Managers) by Jonathan Walters, Governing Books, 1998.*

ODOT has made a commitment to cost accounting because data-based decision making is one of its stated core values. “An effective cost accounting system is essential to showing that tax dollars are being maximized.” In the late 1980’s ODOT developed a work order-based cost system to capture data for equipment and fleet management, called EMS (Equipment Management System.) In the 1990’s it added the TMS (Transportation Management System) to capture project cost data. In 2002-03 it adopted the ODOT Business Plan with a strategic initiative to “Improve ODOT’s accounting information system for more effective decision making.” The goal of this initiative was to develop a sound and consistent activity-based cost accounting system on a statewide basis.

To spread the cost accounting system statewide, experts from the districts were involved in establishing and revising business rules. They created a manual and provided training in all 12 districts. Then they began to conduct Quality Assurance Reviews (QARs) to insure the accuracy and timeliness of data. For the first year the Cost Accounting staff conducted monthly QARs. Now QARs are conducted quarterly and the responsibility has been turned over to the districts. The cost accounting staff conducts a site QAR on a biennial basis.

### TIP

***“Try to maintain consistency of measures and uniform definitions.”***

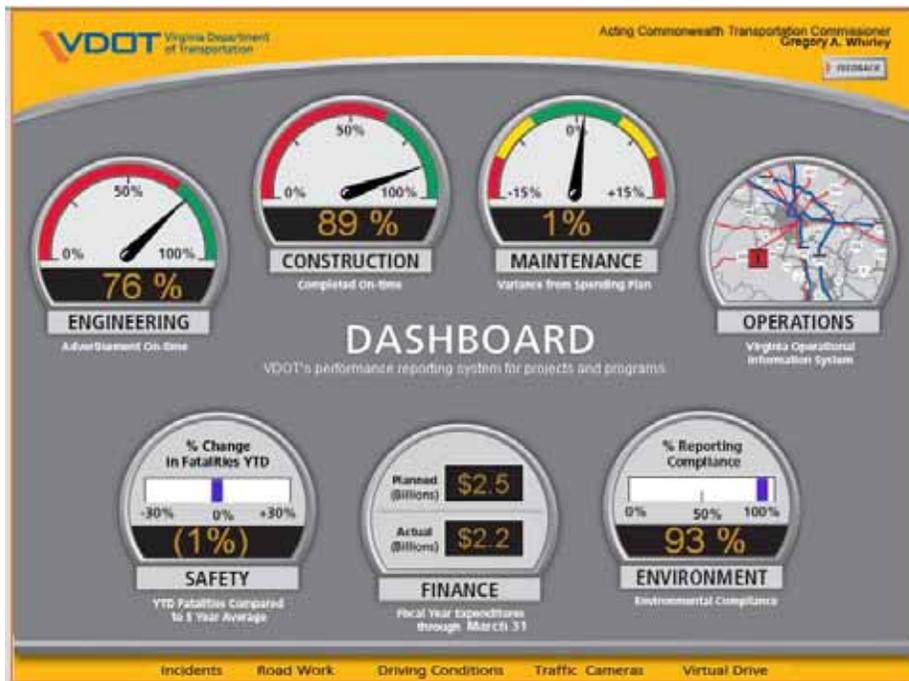
Director Gordon Proctor, Ohio DOT

 The **Virginia DOT** Dashboard displays data in a graphic format that resembles a set of dashboard gauges. The gauges are automatically adjusted on a *daily* basis. The software system, developed internally, queries various VDOT databases each morning, and the gauges are automatically reset to reflect the most current information. The Dashboard was the centerpiece of a previous Commissioner’s successful efforts to refocus the department on its core responsibilities and restore confidence in the department. VDOT is continually refining the Dashboard and a key component is VDOT’s “Watchlist” for more effective monitoring of individual highway projects.

“Performance measures cascade to ‘sell’ what customers want. This creates ownership and pride, and clarifies expectations.”  
*Gordon Proctor,  
Director, Ohio DOT*



## Sample dashboard taken from the Virginia DOT Website.



### TIP

#### *Suggested Readings:*

- *The Balanced Scorecard, Translating Strategy Into Action*, by Robert S. Kaplan and David P. Norton, 1996, Presidents and Fellows of Harvard College
- *Measuring Up, Governing's Guide to Performance Measurement for Geniuses (and other Public Managers)*, by Jonathan Walters, 1998, Governing Books, Washington, D. C.

## Desire to Look in the Mirror

In the organizations identified by Jim Collins in *Good to Great*, the good-to-great companies “displayed distinctive forms of disciplined thought...they infused the entire process with the brutal facts of reality.” Collins goes on to say, “When you start with an honest and diligent effort to determine the truth of the situation, the right decisions often become self-evident...you absolutely cannot make a series of good decisions without first confronting the brutal facts...Good to great leaders understood this, creating a culture wherein people had a tremendous opportunity to be heard, and ultimately, for the truth to be heard.”

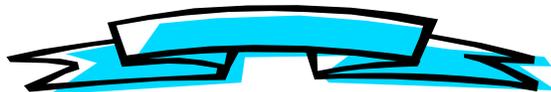
The ten agencies interviewed embraced this principle, though they confronted the facts in different ways. Their methods included:

- Organizational climate surveys
- Employee surveys
- Customer surveys
- Emphasizing dialogue
- Encouraging “devil’s advocate” points of view

Another way to look in the mirror is through criticism from outside the department, even criticism that is unwarranted or expressed in excessive terms. The agencies researched as part of this project viewed any criticism as constructive and important to the process of looking in the mirror. The leaders in these agencies accept Mark Twain’s observation that “Perception is not the main thing. It is the only thing.” They examine whether the criticism may be warranted, at least in part, and how the organization’s practices might be contributing to or legitimizing the criticism. If so, they acted. Rather than being defensive, they looked for proactive ways to reduce or deflect such criticism and keep it from distracting the organization from its positive focus.

The desire to “look in the mirror,” confront brutal facts, be honest and take positive action separates good organizations from great organizations. Gathering data and analyzing it is only half of the equation. Accepting it and doing something about it is the other half. Leaders in effective organizations do not “explain away” negative results or rationalize that negative results are beyond their control.

*The following are examples of Look in the Mirror.*



*“When you turn over rocks and look at all the squiggly things underneath, you can either put the rock down, or you can say, ‘My job is to turn over rocks*



*and look at the squiggly things,’ even if what you see can scare the hell out of you.” Fred Purdue, Pitney Bowes executive (taken from *Good To Great* by Jim Collins)*

## Florida DOT: Taking Action on Survey Data

Looking in the mirror was something at which Tom Barry, a former Florida DOT Secretary, was masterful. He fostered a culture that continues today to focus on taking positive action based on the data.

Since 1999, FDOT has conducted annually a “Leadership and Human Resource Practices” employee survey based on the Baldrige categories of the same name. The lowest scoring item on the first survey was, not surprisingly, the one about pay. The first reaction of the executive team members was to give it little attention, apart from comments to the effect of “not much we can do about that.” After discussion of actions to take on other items, however, Secretary Barry began to realize the problem if the survey results about pay were ignored.

“Our employees are telling us this is a problem,” he said. “We have to address it somehow.” Since no one felt a successful case could be made for pay increases, he directed that a Pay Team be formed to further study employee concerns and generate ideas for addressing them that did not involve pay increases. He also stated that he believed many employees might have a poor understanding of how the exact amount of their pay was determined from the salary rates and policies, so he sent a directive for every manager to ask every employee at the next performance appraisal meeting what questions they have about their pay. The next year’s survey added an item about whether “My supervisor has discussed my pay questions and concerns with me.” About half of the employees answered this affirmatively and, as compared to those who did not, gave significantly higher responses to the pay score and, more importantly, to the large majority of the other 52 survey items.

It would have been easy to do nothing, but there was a determination to face and take action on even the most daunting facts. Although two Secretaries have succeeded Tom Barry, this culture has remained.

FDOT takes its employee survey results further by forming action committees to work on 4 to 6 improvement opportunities each year. In addition, the agency-wide results are broken into reports that combine the survey responses of each Cost Center and each Cost Center manager is required both to share the report with employees and to prepare an action plan for improvement based on the survey results. **Every year the survey results have risen, and the increases have been statistically significant in all but one year.**

**“Assessment is important but the response to it is critical.”**

**Larry Ferguson,  
Manager, Florida DOT  
Performance  
Management Office**

**TIP** Desire to look in the mirror goes much further than just gathering and analyzing data. It is about the response, which sometimes requires confronting brutal facts and always requires taking action on the data!

✚ In 1995 **Arizona DOT** received the Arizona Pioneer Award for Quality from the Arizona Quality Alliance (AQA). The Pioneer Award is based on the Baldrige National Quality Program criteria, and the state award required the same level of introspection and review by outside examiners as the Baldrige Award. The department continued to apply for AQA awards in subsequent years and used the process and the feedback received from examiners as tools for ongoing evaluation and improvement. ADOT also received the “Arizona Governor’s Award for Quality” in 2001.

More recently ADOT has participated in the AQA “Showcase for Excellence” program that focuses on specific organizational processes. Since the program began in 2003, seven different units in ADOT have received awards.

ADOT executives believe that the process of applying for these awards helps improve organizational performance because, as stated by the AQA, the benefits of the Showcase for Excellence program include:

- Better insight into your organization
- Feedback on your submitted organizational process from trained examiners.

ADOT executives also believe that the recognition from winning these awards helps to motivate additional improvements within the department.

One of the newest services provided by the ADOT Partnering Office is a web-based tool, known as the Partnering Evaluation Program, (PEP), to help measure and report on team performance. PEP is a very adaptable tool and can be used for different types of teams regardless of the team’s purpose or membership. PEP can also be adjusted and refined over time to match a team’s stage of development and focus. The various stakeholders in a partnership establish goals at the beginning of their work together and the online PEP software enables them to periodically assess their progress and flag issues that can grow to undermine goal attainment. Assessments made by all team members are compiled into reports for the team to review and determine what actions, if any, to take. Completing an online assessment typically requires only a few minutes. Following is an example of PEP assessment items for goals associated with meeting the project schedule and budget.

The “Partnering Evaluation Program” (PEP) in Arizona DOT helps measure and report on Team performance.

(5) Schedule The process of timely completion	Unresponsive	Marginally Successful		Meeting Expectations		Exceeding Expectations		Don't Rate
	0.5 1.0 1.5	2.0 2.5	3.0 3.5	4.0				
Sub-Goals: Schedule addresses interrelationships of deliverables and activities; Effective use of scheduling tools; Honest appraisal of activity status; Scope, schedule, budget and quality in balance; Meeting delivery dates; Actions taken to address schedule	COMMENTS:							
	<input type="checkbox"/> Take Action <input type="checkbox"/> Neutral <input type="checkbox"/> Provide Recognition							

(6) Budget The process to monitor budget	Not Yet Been Achieved	Occurring in a few Cases		Meeting Expectations		Exceeding Expectations		Don't Rate
	0.5 1.0 1.5	2.0 2.5	3.0 3.5	4.0				
Sub-Goals: Project reflects agree-to scope, On budget at stage services; Actions taken to address and communicate budget variances; Recognize funding limitations	COMMENTS:							
	<input type="checkbox"/> Take Action <input type="checkbox"/> Neutral <input type="checkbox"/> Provide Recognition							

Illinois DOT employs ISO:9001:2000 standards to examine and improve their highway division. This requires significant self-evaluation.

**Illinois DOT** - Due to a change in the budgeting process that allowed very little margin for error, the Illinois DOT was forced to get serious about improving processes. IDOT had already begun strategic planning and had adopted 15 general objectives, one of which outlined the need for process improvements throughout the organization. In 2003 the new Secretary of Transportation suggested that ISO 9001:2000 standards would be a logical next step as their method for examining, improving and controlling all facets of their highway division, including process work. He asked his assistant for Strategic Planning, a long-term employee, to look into ISO but didn't insist that they drop what they had already done. They agreed that implementing ISO made sense so they first focused on about two dozen processes for improvement and then expanded. They have focused on improved scoping, scheduling and budgeting for projects.

ISO certification requires significant self-evaluation to prepare for review. It forces them to read their own policies and update them regularly. It encourages them to look at what must be done, what is nice to do if they can, and allows them to get rid of what is not important. Because IDOT is meeting with success as a result of implementing ISO 9001:2000 with its Highway Division, there are plans to expand this certification throughout the Division of Highways including all nine regional districts, and all support services, over the next few years.

The **Maryland State Highway Administration** believes in the need for self-assessment and so invested in creating its own Baldrige-like instrument that also reflects specific issues germane to government. Each district and headquarters office is conducting a self-assessment using this

Maryland SHA created its own Baldrige-like assessment.

instrument. Although this got off to a rocky start, lessons learned from the “pilot” and each subsequent round were applied to improve the next round. The objective of having each District conduct this self-assessment is to reward strengths and identify areas for improvement, with the overall goal to improve organizational effectiveness.

Each district and office completes the self-assessment and, based on the results, identifies a vital few “opportunities for improvement” (OFIs). These are incorporated in the local business plan, which is aligned with the SHA Business Plan. When all offices and districts complete the self-assessment, the aggregated data will be reviewed to provide organization-wide data.

MDSHA has applied for the Maryland Quality Award (Governor’s Performance Excellence Assessment Program) five times. It won the gold four times and second place the fifth time. MDSHA uses self-assessments to learn what they can do better. Applying for and winning an award is a secondary objective.

**TIP**

- Use pilots for assessment and apply lessons learned to the rest
- Do one slice at a time; it’s easier to make change happen

Neil Pedersen – MDSHA

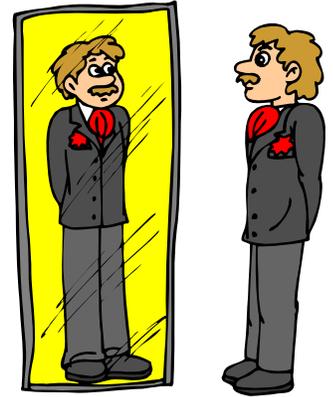
 **Missouri DOT** is currently using Baldrige criteria to conduct an organizational assessment. The assessment results will help the department set priorities for management initiatives, and apply for the Missouri Quality Award program.

In addition to using the Baldrige criteria for self-assessment, the MoDOT leadership encourages participation in the Governor's Award for Quality and Productivity (GAQP), a program specifically for state agencies. MoDOT teams received two of the six GAQP awards in 2005, and a third award went to a group of state agencies, including MoDOT, that worked together to improve management of the state’s vehicle fleet.

 **Ohio DOT** - In addition to Quality of Work Life surveys (with a 90% return this year), Ohio has a “Performance Excellence Process” that helps it to “continuously focus on creating a quality culture as measured by the Baldrige criteria.” ODOT partners with the Ohio Partnership for Excellence™ (OPE), a non-profit organization that utilizes the Malcolm Baldrige Criteria for Performance Excellence to help organizations see improved results.

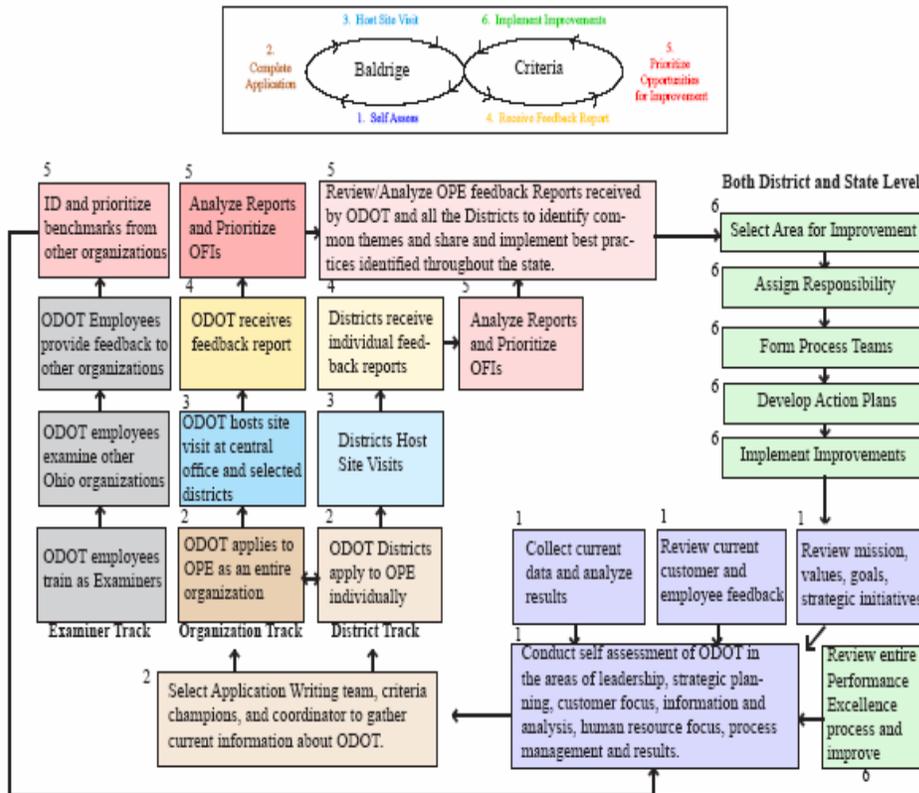
*Ohio’s  
Performance  
Excellence  
Process is a  
structured six-  
step process to  
help focus on a  
quality culture.*

OPE sends trained examiners to all ODOT Districts and Central Office to review their approach and results in the Baldrige categories. OPE provides a comprehensive feedback report of strengths and suggested opportunities for improvement (OFIs). ODOT then prioritizes the OFI's and forms process improvement teams to develop and implement solutions. The process continues annually or semi-annually when a new set of examiners reviews ODOT's progress and provides new strengths and OFIs.



### Ohio Department of Transportation Performance Excellence Process

Business Plan Objective 5.5: ODOT will continuously focus on creating a quality culture as measured by the Baldrige Criteria.



## Alignment

Alignment exists when stakeholders, both internal and external, are clear and like-minded about the organization's goals and how they will be achieved. All of the DOTs were very sensitive to the need for their agency's vision and priorities to be aligned with the Governor's vision and priorities for all of state government. Then they invested in building that alignment internally in their organizations and with their external stakeholders.

### Aligning People: New Mexico DOT

John Kotter in his classic Harvard Business Review article (1990), "What Leaders Really Do," emphasizes the role of leaders in aligning people. According to Kotter, aligning is largely about communication and invariably involves talking to many individuals. "Alignment leads to empowerment...when a clear sense of direction has been communicated throughout an organization, lower level employees can initiate actions without the...vulnerability."

Much like Kotter describes, Rhonda Faught, Secretary, NMDOT, has invested in alignment, in building a collective identity, in empowering employees to take initiative, to do "whatever it takes" to make NMDOT "great". "We are public stewards – it's not about Districts; it's about us as a department." The vision of quality, customer service and continuous improvement has been inculcated throughout the organization. There are no silos. There are no boundaries. All levels talk to each other. The shared vision for NMDOT is that it will be "an international leader. We are inventors and providers of a transportation system that serves everyone."

The Secretary deliberately put into place numerous vehicles to emphasize the vision and the strategic priorities established in their Good To Great Strategic Plan. There is a strategic and brilliant effort to build alignment, to help people see how what they do fits into the mission and vision of the agency.

- She appointed a Quality Coordinator, who spends the majority of his time in the field talking to people, selling the vision, helping them see how they can achieve it and how what they do is aligned with the mission, guiding principles and "Good to Great" strategic priorities.
- Each District has a Quality Manager to "share the vision" and to help implement the strategic priorities.
- As indicated under the theme Dialogue, the Secretary, headquarters people from HR and Benefits, along with the Ombudsman, make regular visits to the field, not just to share information, but also to gather information.



- The Secretary speaks at every new employee orientation about what is important for the department. (Her advice is to “be visible.”)
- There are quarterly management “Trailblazers - Good To Great” meetings that recognize best practices and accomplishments and assess them in terms of achieving their strategic priorities.
- In addition, NMDOT has a program entitled “Imagine 21” that is used as a basis to build alignment and translate the vision into action. This program is voluntary although strongly encouraged. It is a series of workshops that helps employees figure out their strengths, where they want to go (both personally and professionally), and how they fit into the agency vision and strategic priorities.

There was much attention paid to external alignment as well, focusing on open communication with their FHWA liaison, holding “listening sessions” and “summits” with the tribal governments (see Dialogue), in small rural communities, and in the cities to keep constituents informed and, equally important, to ask for their input.

### TIP

“Be visible, have a consistent message, support from the Governor, confidence that we can get it done; walk the talk.”

*Rhonda Faught, Secretary, NMDOT*

✚ The **Arizona DOT** recently updated its Strategic Plan, and a primary objective of the planning process was to promote organizational alignment. As one of the first steps, the department’s core team of executive leaders conducted a complete reassessment of strengths, weaknesses, opportunities, and threats. That effort provided the foundation for subsequent changes in the plan. Considerable turnover had occurred since the last comprehensive update of the plan, and the process generated a “rich dialogue” and served as ‘bonding process” for the leadership team.

A number of significant changes were made in the Strategic Plan, including restatement of the department’s mission, values, and critical issues. Before those changes were made, however, the leadership team submitted its findings and suggestions for response from all levels of the department and from other stakeholders, including contractors. That review and feedback process further contributed to alignment, both in terms of understanding the department from an overall perspective and in creating a sense of ownership.

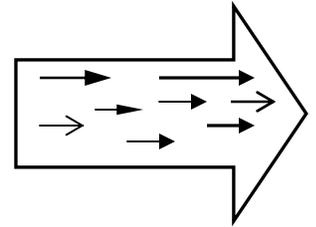
Every ADOT manager receives 8 hours of training on Strategic Planning and Budgeting to help ensure that every employee understands how their work aligns with others to accomplish the mission.

Following approval of the final version of the plan, ADOT made ongoing investments to ensure that every employee and stakeholder understands its mission, vision, values, strategic and critical issues, and goals. The key words and phrases that explain the most fundamental aspects of ADOT as an organization are presented in newsletters, posters, wallet cards, and other publications and presentations. The Strategic Plan is now part of formal New Employee Orientation, and each new manager in ADOT must complete 36 hours of training within six months of assuming a management position, which includes eight hours on strategic planning and budgeting. The objective is not just to make sure that each employee and unit is aware of the details, but also to ensure that every employee and unit understands how their work aligns with others to accomplish the department's mission.

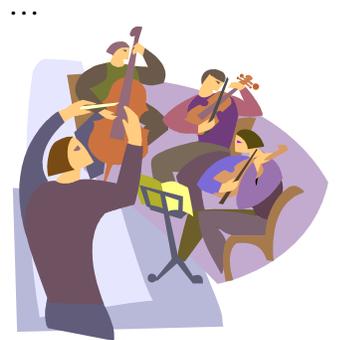
Alignment in the **Missouri DOT** has a focal point that is very visible within the department and to outside stakeholders - the Tangible Results. The Tangible Results, a total of 18, were identified by senior leaders as describing MoDOT's core responsibilities. Each of the 18 items on the list is expressed in terms that are meaningful to the department's customers, and MoDOT's leadership tries to weigh every decision in terms of how to best achieve the Tangible Results.

Several examples can be cited to illustrate the use of Tangible Results to promote alignment, beginning with MoDOT's organization chart (see below). That chart shows Tangible Results at the shared hub of every division. Of course, MoDOT's performance measurement and reporting system, the Tracker, is built around the Tangible Results with a set of measures associated with each "result."

Another important example is the formation of the Organizational Results Division "to provide support and consultation to MoDOT managers in achieving our 18 tangible results." This division was initially staffed with personnel from three program areas (Strategic Planning; Employee Development; and Research, Development and Technology) to create "a team of 21 people focused on providing MoDOT managers with business, policy and engineering solutions and innovations to deliver our 18 Tangible Results." One aspect especially applicable to the topic of alignment is that MoDOT realigned its entire research program to focus on research areas that are directly linked to specific Tangible Results.

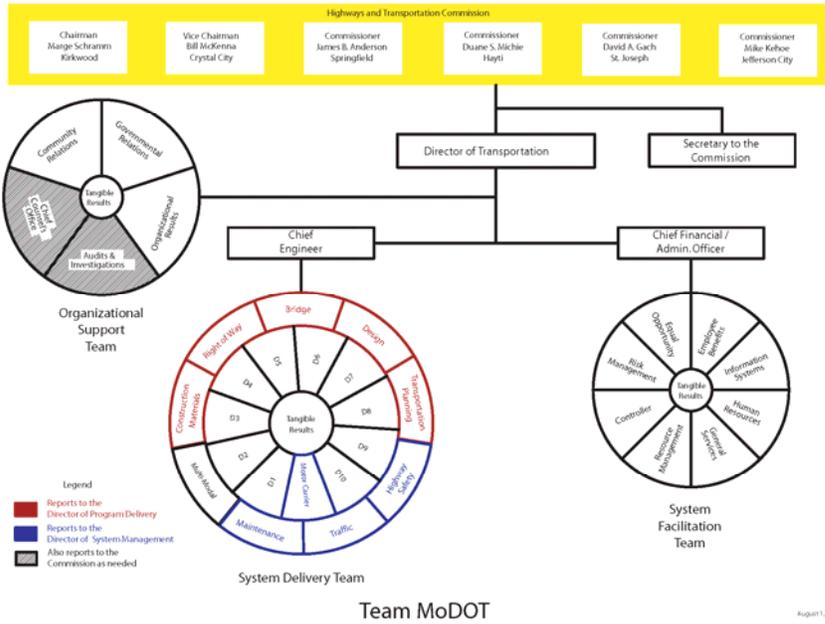


"The fundamental characteristic of the relatively unaligned team is wasted energy... when...aligned there is commonality of purpose.



There is a phrase in jazz, 'being in the groove' that suggests the state when an ensemble 'plays as one.' Musicians know about alignment."  
- The Fifth Discipline by Peter M. Senge

# Missouri Department of Transportation



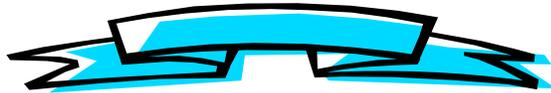
The years teach  
much which the  
days never knew.  
Ralph Waldo Emerson

## Dialogue

All of the agencies interviewed invest in dialogue with their employees and their constituents. This is not happenstance. It is planned and strategic. The term dialogue is used here instead of communication because dialogue in Greek, *dia-logos*, means a free flowing of meaning, allowing the group to discover insights not attainable individually. Dialogue means genuinely thinking together.

CEO's travel the state to talk to employees, hear their concerns, learn what they are most proud of, share the vision and talk about strategic priorities. In every case customer surveys are conducted to ascertain what customers need and want, and to find out how well they are doing. Customer surveys took many forms, such as telephone polls and interviews at rest stops but regardless of how it is done, an effort is made to learn what customers' priorities are.

*Following are examples of best practices when it comes to Dialogue.*



 **Florida DOT** pays attention to the importance of communication both internally and externally and established a policy “to maintain effective communication with our employees, partners and customers.” Internally, there are Communication Champion Teams and guidelines established to ensure that information is communicated to all levels. District Directors are required to meet with their direct reports and it cascades to each level. The goal of FDOT's leadership in establishing the policy, guidelines and champions, is to no longer hear, “We never heard that!”

 **Missouri DOT's** Human Resource Division has implemented a comprehensive approach to dialogue with the department's more than 6,000 employees. A statewide Employee Advisory Council was formed in 2004 in response to suggestions from the annual employee survey. The Council has 25 elected members, with only two from headquarters, and the membership includes supervisory and non-supervisory members and a diverse cross section of the MoDOT workforce. The Council, which meets monthly, supplements other channels of communication to help ensure that management hears and communicates with the employees. The Council's minutes and action reports are shared electronically with the entire department.

“Most importantly as Secretary, I have to get out and recognize the people in this agency who are doing the work. And listen to them. Not tell them, but listen.”  
- Denver Stutler,  
FDOT

**“We never heard ~~NOT~~ that.”**  
*Florida DOT*

✚ **New Mexico DOT** – The Secretary travels the state at least twice a year to visit each District. One of her frequent messages is, “I work for you.” Her advice is to “be visible,” adding, “People don’t care what we know until they know we care.” The Secretary does employee orientation every month to talk about what she thinks is important for the department. As mentioned under Champions, in NMDOT there is focus on providing a clear, consistent message and outreach to employees throughout the state. The Quality Coordinator, by design, spends 60 percent of his time in the field. District Quality Coordinators work for the District Engineer but coordinate with the Quality Coordinator to ensure consistency of message and identify and share best practices that serve to achieve the department’s vision.

In addition, NMDOT utilizes its Ombudsman as a liaison to employees. This position serves as an intermediary between management and employees regarding concerns outside the responsibility of Human Resources and the State Personnel Office. The Ombudsman oversees individual employee awards and recognition programs and conducts the annual Employee Organizational Climate Survey. Additionally, Human Resource and Benefits staff makes regular visits to the Districts and oversees management and employee relations. Both offices work closely with Quality to understand and learn about employees concerns throughout the state and work in a coordinated approach to address employee issues where pertinent.

The Secretary held “Listening Sessions and Summits” with the public and the 22 Native American nations, and tribal and pueblo governments that she has to work with in the state. In the Listening Sessions, she and the members of her staff who participated in these sessions were NOT allowed to talk except to clarify. Secretary Faught said this was really challenging, but powerful. At the end of the sessions, participants said things like “We know you can’t really do anything, but at least you listened to us.” The Summit provided a forum to discuss communication, agreements to work on projects, and to resolve issues of mutual concern.

✚ **North Dakota DOT** – The Director of the North Dakota DOT believes that communication is his most important leadership responsibility, emphasizing how important it is to “walk the talk” and “help people believe that you believe in what you are saying.” He and his leadership team travel the state to visit all of the districts at least once a year. They participate in work team meetings via video conferencing. They attend every new employee orientation to share a brief message and answer questions.

*The Secretary of NM DOT holds “Listening Sessions” with the public and tribal governments.*

*“It’s hard to just listen but it is also powerful.”*



*“I can make one guarantee about our Department. We will listen first and then we will act together.”  
Rhonda Faught,  
Secretary, NM DOT*

When they first began sharing their message they found that it did not find its way to the front line employees. To make sure that their message was distributed widely they mailed information to employees at their homes. Now they are spending time helping managers understand how to share the message of their strategic direction.

## TIP

*Suggested reading:*

- *Powerful Conversations, How High Impact Leaders Communicate.* Phil Harkins, 1999, McGraw Hill

 **Virginia DOT** - DOTs are large organizations with multiple responsibilities, multiple divisions, districts, and offices, and diverse constituents. Under those circumstances, effective dialogue requires effective management of information, and Virginia DOT has adopted an “integrated and consultative” approach to communications. One component is a formal Communications Plan with specific goals, objectives, and associated performance measures. The plan addresses a wide range of objectives, including more effective involvement of employees in identifying and responding to media issues, improving communication skills for VDOT leaders, creating more “brand” identity for the department, supporting internal communication, proactively highlighting the department’s core business activities, providing better information about traffic and roadway conditions, improving communication with public officials, and increasing public participation in planning and project development.

The following matrix is a working document that is part of VDOT’s efforts to ensure an integrated approach to implementation of its communications plan. This matrix recognizes the relationships among some of VDOT’s largest “audiences” and some of the key aspects of communications.

“In dialogue, a group explores complex difficult issues from many points of view. Individuals suspend their assumptions but they communicate their assumptions freely. The result is a free exploration that brings to the surface the full depth of people’s experience and thought, and yet can move beyond their individual views.”

*From The Fifth Discipline  
by Peter M. Senge*

**Integrated Communications**

Audiences	Products	Image/tone	Brand attributes	Program (measures)	Partners
Traveling public - traffic reporters - interstate travelers - employers	- Web areas - 511 rack card - In Motion	People relaxing, breathing deeply. Cool and calm.	QoL: Social, Economic, Safety  VDOT: Trust, Satisfaction	Operations management	STCs EOC ITS-511 DIOs DRPT
Communities - MPOs - Residents - media - opin. leaders - local business	- TCP and SEPG newsletters - Pick-Up Express	Beautiful roads and roadsides. Smart and simple. Progress. Multimodal.	QoL: Environment, Economic  VDOT: Mutual Control, Trust	Maintenance and improvement of roads and roadsides;  planning for future transportation needs	Environmental Asset. Mgmt Planning Local Asst. Loc & Des
Employees - recruits - retirees	- Recruiting broch. - Exec. Leadership - Bulletin - Orientation - Training	Sharp, outdoors, research-oriented. Casual. Cool things happening.	VDOT: Innovation, dedication, VDOT Values	Leadership. Employee orientation and training. InsideVDOT.	HR, KM Learning Center Civil Rights
Public Officials - State - Local - media - CTB	- Fact Book - Dashboard v2 - Quarterly report - Biennial report	Smart, buttoned-down, efficient. Moving forward.	QoL: Environment, Econ. development  VDOT: Mutual Control, Satisfaction	Maintenance and improvement of roads and roadsides; planning for future transportation needs	DIOs – REs Commish staff Local Assistance
Transp. industry - Road builders - FHWA - AASHTO	- DBE marketing	Strong and smart. Responsive and innovative.	QoL: Environment, Econ. Dev., Safety  VDOT: Mutual Control, Trust	Maintenance and improvement of roads and roadsides; planning for future transportation needs	Civil rights Construction Asset Mgmt

**VDOT ensures an integrated approach to communication.**

12/5/2005

VDOT also recognizes that, with its size and diversity, valuable information about customer needs and preferences may exist within the department but not be available or even known to decision makers. Thus, VDOT worked with the Virginia Department of Rail and Public Transportation to create the Virginia Transportation Marketing Research Database, a Website for “easy access to past marketing research studies.” The site is also available to the public.

**Virginia Transportation Marketing Research Database**  
a marketing information resource center for transportation planners

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Welcome to The Virginia Transportation Marketing Research Database. This site contains marketing research studies conducted by the Department of Transportation (VDOT), the Department of Rail and Public Transportation (DRPT), and other leading transportation agencies across Virginia. The studies cataloged here cover a wide range of transportation topics. For a complete list of topics covered [click here](#). And, for a complete listing of all studies included in this database [click here](#), or use the Site's search features presented below.

**Search Studies Conducted**

To locate a research study, simply use the boxes below (subject, region, year, or key words). All of these search features are optional. A study search will work with just one box. The more boxes you use, however, the narrower the search.

Once you select your entry or entries in the boxes, click on the "search" button. Related studies will appear. When you see any particular study of interest, click on it for a brief two-page executive summary. All related files (reports, questionnaires, etc.) are attached.

Subject topic:

Region covered:

Key word:  [view list](#)

Year: (4-digit)

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**Click On What We Know**

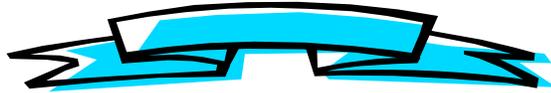
The studies included in this site have added to our collective knowledge base on how commuters and Virginia travelers perceive different transportation topics, programs, and commute options. Click for an overview of what we know.

- [Employer Support For Transportation Demand Management](#)
- [HOV Enforcement](#)
- [HOV Ridesharing in Hampton Roads](#)
- [Overview Of Congestion Management Programs](#)
- [Telework](#)
- [Tolls](#)
- [Vanpool](#)
- [Guaranteed Ride Home](#)
- [Smart Tag On The Dulles Toll Road In Northern Virginia](#)

## Taking Care of Business

Many organizations do strategic planning, business planning, and/or have organizational goals. The difference between those organizations and the agencies interviewed is a matter of focus and action. The focus is on key objectives, goals, or strategic priorities. The names and formats vary, but in each agency there is a very clear picture of what is important in the organization, a picture that all employees understand and can work toward. The goals are aligned with the mission and vision of the agency. In addition, this focus leads to action, and the visited organizations displayed a bias for action. That is why it's called "taking care of business." As Pete Rahn, the Director of the Missouri DOT, put it, "DOTs (and most government agencies) lack a sense of urgency. Some of that is the fear of making a mistake, but I would rather be 9-1 than 1-0."

*Examples of how some transportation agencies are doing this well follow.*



### **Arizona Department of Transportation**

All Arizona state agencies are required by legislation to carry out strategic planning as part of the state's annual budget process but ADOT has gone far beyond compliance with the state requirements and uses strategic planning at the departmental and unit levels to help maintain focus on mission, vision, goals, and strategic and critical issues. Every organizational unit in ADOT prepares or updates a strategic plan on an annual basis. Further, the divisions' and unit level strategic plans are linked to the department's performance measures. Thus ADOT's strategic planning process is both "top down" and "bottom up."

### **Florida Department of Transportation**

FDOT has a Business Model based on Baldrige criteria, and a five-tier Business Plan with all tiers aligned with the Business Model. Each tier has measures, targets and champions.

- Tier One is the Statewide Business Plan created annually by the Executive Board. It is high level, is driven by their customer survey data, provides overall direction to the organization, and is the basis of all other plans.
- Tier Two is made up of the Statewide Function Plans (i.e. Construction, Maintenance, Human Resources, etc., the 24 primary

**Taking Care  
of Business  
requires  
FOCUS and a  
BIAS FOR  
ACTION**

functions of the agency) created as a cooperative effort between Central Office and the Districts defining the key business objectives of each function and the linkages to the Tier One plans. These plans also include direction on which Tier Three plans need to be created. All Districts in each function meet to do Tier Two planning.

- Tier Three is comprised of the Functional Unit Plans that support the Statewide Function and Organization Plans. It is driven by Tier Two and created by each function in the Districts, Central Office, and Turnpike.
- Tier Four is each Office or Unit's Business Plan and is driven by Tier Three.
- Tier Five will have individual plans for every employee that will be updated annually to reflect the activities and tasks identified in Tier Four.

Tier Three is currently being done throughout the organization and Tier Four is being done in many of the Districts. Completion of Tiers Four and Five is targeted for April 2007.

Each tier of plans becomes more detailed and specific in objectives, activities, and measures. The Business Plan is a dynamic approach that involves all functions of the agency and includes the involvement of all employees. Information and requirements flow from Tier One to Tier Five while feedback, supported by measures, flows upward.

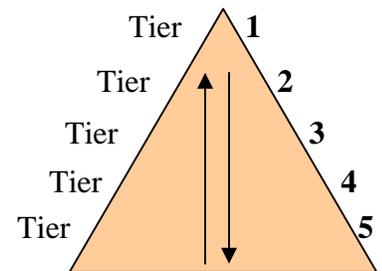
#### **Illinois Department of Transportation**

The Illinois strategic planning process involves staff at all levels of the organization. Management traveled throughout the districts and met with groups of 20 that were specifically chosen to represent various departments at various levels in each district. Using the four topics from their balanced scorecard -- Customers, Programs, Processes, and Human Resources -- they gathered information and ideas from the "street level" up. They worked to convert skeptics in the organization because they believed if the skeptics were convinced that the strategic plan provided a good direction for the organization, other employees would follow. Their planning model is depicted as a pyramid with IDOT values at the top followed by the mission and vision, Quality Policy and Objectives, Strategic Planning (both Budgetary and Operational), and the Management System. At the base are Planning, Design, Construction, Employee Development, Administrative Oversight, Maintenance of Existing Roads and Bridges, and Control of Outsourced Labor.

#### **Maryland State Highway Administration (MDSHA)**

"Performance Excellence" is the current designation for the SHA's strategic management program. MDSHA has a Business Planning Process (updated every 4 years) that clearly defines desired outcomes

*Florida DOT's Five Tiered Business Plan* includes all functions and involves all employees. Information and requirements flow from Tier 1 to Tier 5 and feedback, supported by measures, flows upward.



through a series of customer-driven goals and objectives with performance targets that measure the progress of the organization in achieving the desired outcomes. Strategic planning sessions and SWOT analyses are held with each office to help build the Business Plan. This process, and the goals and objectives, are used to manage the organization, including justifying budgets and staffing levels, based on the results achieved. The Business Plan is used to develop individual work plans. Managers also use the Business Plan to measure their progress toward outcomes that the organization has identified and agreed are important.

The Senior Management Team develops the Business Plan in a collaborative way with input from employees and stakeholders. They conduct scans of internal and external influences and use an outreach process that strives to be accessible to all customer groups. Broad organization goals from the organization's Business Plan are cascaded down and then each District and Headquarters office identifies strategic, measurable objectives, in line with the broad goals. They also add goals and objectives that are specific to that unit. As a result, each District and Office has its own strategic plan.

#### **New Mexico Department of Transportation**

NMDOT's strategic planning process goes under the banner of "Good to Great." There are four clear "Strategic Priorities," in the form of a modified balanced scorecard. Each quarter a "Good To Great Strategic Plan and Performance Report" is prepared and there is a manager's meeting to review progress against goals. Each District has autonomy in how they implement the strategic plan and in developing their own goals in alignment with the four Strategic Priorities.



#### **North Dakota Department of Transportation** *Soaring with the Phoenix*

When North Dakota DOT leadership sought a model for their strategic planning process they turned to the book "Soaring with the Phoenix" by James A. Belasco and Jerre Stead. "Phoenix" provides a roadmap for revitalizing and renewing an organization, including lessons for Phoenix leadership and for creating a foundation for future success. It suggests a systematic way to go beyond strategy to shape the future and create a culture that celebrates performance and accountability.

"Phoenix" provided NDDOT leadership with a starting point and they tailored their approach to meet their needs. North Dakota strategic planning is a relatively young system. Over its first four years the

**North Dakota DOT's**  
Strategic Planning model began with the book, "**Soaring with the Phoenix: Renewing the Vision, Revising the Spirit and Re-creating the Success of Your Company**" (Belasco and Stead) and then they customized their own strategic planning model.

The book invokes five overarching principles:  
*create your own future,*  
*utilize your connections,*  
*help others learn,*  
*help others succeed,*  
*and*  
*take ownership of your company and your life.*

The authors offer readers a way to use these strategies to revitalize themselves and their organizations.

process has been streamlined and the number of goals reduced to five. For each goal three to nine objectives were developed. An “Objective Owner” was identified for each and charged with the responsibility to put together a work group including all people who are involved and have an interest in helping to achieve the objective. Some team members are from outside the organization. These cross-functional teams plan their course of action using the Deming approach.

At first the leaders found that mid-level management was not sharing the message with line staff, convincing them of a need for a culture change in the organization. To bring about this culture change and convince employees at large that they were serious about implementing the strategic plan, the leadership team went to all the districts and shared the plan with line staff. They also sent information to the homes of the employees and are giving more direction to mid-level staff on how to share the goals and objectives.

**Ohio Department of Transportation (ODOT)**

Ohio DOT has an iterative strategic planning process (“360° strategic-planning to project delivery cycle”) that operates in a 2-year cycle.



Plans are nothing;  
planning is everything.  
Dwight D. Eisenhower

Plans and goals have clear, specific, numeric milestones and performance measures which cascade down to all districts and even

counties. Every two years the initiatives are updated and refined to create new goals based upon customer requirements, system performance or other strategic input. It is a proactive process that goes out for 5 to 6 years that includes a work plan so detailed that people will know how many hours they will be out for training and can plot that in and figure hours without disrupting business. Contractors now know when a project is going to “sell” and can plan accordingly. Every Monday and Friday the Director gets updates on strategic initiatives.

The strategic planning process drives daily performance because it is included in annual evaluations, quarterly performance measures, annual performance measures and biennial initiatives.

Governing Magazine rated ODOT's infrastructure management as an A-. The Ohio General Assembly two years ago enacted a six-cent fuel tax increase in response to ODOT's request for it to fund a strategic, 10-year transportation investment program. The General Assembly has been complimentary and rewarding to ODOT because of its efficiencies, strategic planning process and its accomplishments.

#### **Virginia Department of Transportation**

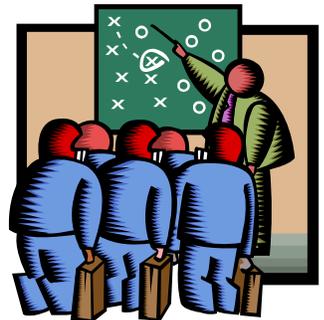
One of the recurring comments from VDOT managers during the interviews for this research was that the department had regained its “focus,” and, as a result, had regained the confidence of its board, the legislature, media, and the public. By defining and focusing on core business areas and a few corresponding performance measures, the department was once again on a steady foundation. The center of that focus was to deliver projects on-time and on-budget, and the only formal program to support that focus, this far, has been the Dashboard.

#### **TIP**

“Don’t try something unless you’re serious and can commit all of the resources necessary for success. If it really needs ten people, don’t assign six and kid yourself that it will work.”

Mal Kerley, Chief Engineer, VDOT

#### **Virginia DOT - Focus**



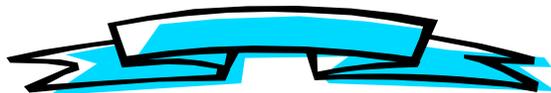
## A Culture of Kaizen

A culture of continuous improvement is the norm in the DOTs interviewed. Most had specific programs in place to cultivate and reward innovation and continuous improvement, such as Virginia DOT's "Commissioner's Awards for Outstanding Achievement" given to those employees who "stood tall in developing systems, processes and innovations; in showing leadership and resourcefulness; and in exhibiting excellence in customer service." However, even if there had been no specific programs or initiatives, the presence of that culture was apparent in the attitude of the leaders and managers and in the willingness of employees at all levels to propose improvements.

The observed attitudes among leaders and managers included a strong determination to accomplish improvements, optimism that such efforts would succeed, confidence that everyone who shared responsibilities for implementation would give their best effort, and eagerness to move forward. Noticeably absent was fear of blame or recrimination if attempts to improve were less successful than expected. Leaders and managers also talked proudly of improvements that had been proposed and implemented by supervisors, managers, and employees outside of the "executive team." In some cases, the improvements were implemented with little more than tacit approval from the top.

One manager described the results of new leadership that encouraged their department to move from a "bunker" mentality to one in which people were willing to take a chance. The norm quickly moved from asking for permission at every step to "make somebody say stop." An important by-product was that the organization had begun to recover its sense of pride.

*Following are highlights of some of the practices and programs we discovered.*



### Florida Department of Transportation

FDOT's continuous improvement culture has had a long history, has been maintained under three secretaries, and was cited as exemplary in the March 2006 issue of Florida TaxWatch: "Continuous quality improvement requires committed and consistent structure and direction from the top. Because state agency leadership changes frequently, a continuous improvement culture must be institutionalized as a high priority of day-to-day business. This includes installing a management

**Kaizen: a Japanese term for continuous improvement; change (kai) to become good (zen)**

All of the ten agencies visited displayed a desire to become an organization that Peter Senge would describe in his best selling book, *The Fifth Discipline*, (Doubleday, 1994) as a Learning Organization, "where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nourished, where collective aspiration is set free, and where people are continually learning how to learn together."

system with the mindset that solving problems is a great thing to do and a basic way of conducting business...”

The department began its Process Management efforts, in conjunction with a Strategic Objective to Implement a Results-based Management System, by identifying Core Processes (processes which are essential to meet the needs of the department’s six external customer groups) and Key Support Processes (processes which are essential to support the Core Processes).

The managers of these processes, known as Core Process Owners, work with other managers and employees from around the State who are involved in the identified process to develop “maps” or Process Control Systems. They then prioritize steps or sub-processes within the process to ensure a tight linkage to the department’s overall Business Plan goals and objectives. All core processes are mapped.

While FDOT has always had a Best Practices section in their Quality Assurance Review (QAR) process, they are currently initiating a “Lessons Learned” process to capture lessons learned from *all* aspects of their business, and at all times, not just during QARs. For example, debriefs after litigation will include Lessons Learned; close-out meetings for contracts would include listing Lessons Learned; and any manager or employee should be able to share Lessons Learned from any event or activity at any time. The goal is to have a clearinghouse for these Lessons Learned so that everyone in the organization can access them, learn from them, and not have to reinvent the wheel or step in the same pothole. Therefore, FDOT is currently trying to build a user-friendly portal on their intranet site that will allow for easy input and easy search and access of Lessons Learned.

#### **Illinois Department of Transportation**

With a strong emphasis on the ISO 9001:2000 standards since 2003, IDOT has put a new focus on improved measurement, analysis and continuous improvement. By implementing the ISO standard as IDOT’s method of process management, process information, including standard operating procedures, are managed better and communicated more effectively, allowing line staff to be better trained and informed on both procedures and goals.

*Florida has “Core Process Owners” who are responsible for the processes essential to the meet the needs of their customers.*

**Illinois DOT places strong emphasis on ISO 9001:2000 standards**

### **New Jersey Department of Transportation**

The NJDOT Project Management Office hosts an on-line “Lessons Learned” database. Project managers share their experiences with the goal of increasing organizational learning to help others avoid making the same mistakes and to capitalize on their successes. Project managers can search the Lessons Learned database and can submit new lessons learned which include actions taken and consequences. Lessons learned provide an important record of what went right and what went wrong.

New Jersey DOT hosts an on-line “Lessons Learned” database to increase organizational learning.

### **New Mexico Department of Transportation**

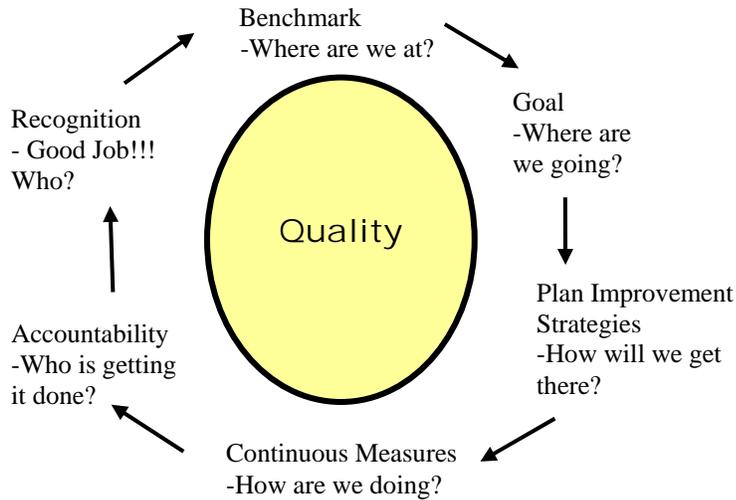
NMDOT has instituted a “Whatever It Takes” Best Practices Program. This program recognizes and, more importantly, shares innovations and improvements that employees come up with to improve quality of life for them and for the customer. These improvements and innovations are recognized in the newsletters and in a book that is created for that purpose. Best Practices are posted on the department’s internal and external websites, as well as shared at the quarterly meetings where employees present what they have done. NMDOT also recognizes the “employee of the quarter” with eight hours of administrative leave for innovative ideas.

All maintenance personnel go through customer service training because “they are the ones who meet the traveling public.” To provide better service to the public, NMDOT has a “no boundaries” approach. It used to be that every maintenance patrol had a boundary and their work stopped at that boundary line, regardless of what was just over the line. Now there are no boundaries and maintenance does what needs to be done wherever it needs to be done.

*“Whatever It Takes” to meet customer requirements is the theme in New Mexico DOT.*

District 6 of NMDOT has raised the bar and taken quality and continuous improvement to a benchmark level. It has instituted a six-step Quality Process that is used to incorporate the changes necessary to continually improve upon existing goals.

## District 6 Quality Process



In addition, continuous improvement is as much for NMDOT employees as for customers. Strategic Priority Number 1 for NMDOT is “A Great Place to Work; Striving to be the Employer of Choice in New Mexico.”

### Ohio Department of Transportation

ODOT’s performance measures and its cost accounting system have significantly contributed to improving performance, productivity and reliability. All common functions are tracked across all districts for cost and effectiveness. Best practices are singled out and spread across the department. All districts are held to common benchmarks of performance and are expected to raise sub-standard performance to the departmental optimum.

One of ODOT’s values is “agility” which means no silos and the ability to respond quickly to customer needs. They focus on “what matters most” to the customer. For example, snow plowing is a big concern of customers and ODOT has trained central office people (volunteers) to do snow plowing if needed.

ODOT created an annual event, “Team Up/Innovation ODOT,” to help capture, share and recognize the innovative best practices and results of process improvement teams. Opportunity for Improvement (OFI) Teams are a result of the Performance Excellence Process that ODOT uses to self-assess against the Baldrige criteria. Teams from all Districts document the process improvements they have made during the year and showcase them in booths in a large auditorium. The department publishes the “Results Book” which describes all of the projects; lists the

*“We expect innovation.”*  
*“Ask, are we doing it the fastest, best way possible?”*  
 Gordon Proctor,  
 Director, ODOT

results, including cost savings, and gives a contact person for more information. The districts look forward to learning what others have done and taking the ideas that will work for them back to their own districts or counties. The 2005 Results Book showcases 49 projects with a conservative estimate of over \$2 million in actual or expected savings. Recently, they created a new "virtual" Team Up Ohio that allows employees to tour booths online, download the data and information provided by each team and watch streaming videos of speakers, presentations and workshops.

ODOT has adopted the "Good to Great" process of emulating best in class organizations, honing performance measures, listening to customers and continually reviewing progress to improve the Ohio transportation system. ODOT's quality improvement process, called QStP (Quality Services through Partnership), is based upon Xerox's award winning model. Employees use a 9-step "plan-do-check-act" process improvement model and a 6 step problem solving process to make improvements in their work processes and improve OPI scores.

Other things ODOT does to ensure continuous improvement and innovation:

- It has developed a "Maintenance Quality Survey" process designed to identify roadway deficiencies. This began by establishing common definitions of what is a good product. Four full-time employees travel all of the districts looking for deficiencies from established standards in areas such as pavement, striping, guardrail, signage and litter. Using a GPS system, they can push a button and record where they find a deficiency. The counties develop yearly work plans to address deficiencies and improve roadway conditions. This Six Sigma philosophy, which is based upon consistency, is also used on pavements. Recognizing that a smooth ride is important to their customers, they measure how many bumps per mile. Their motto is - "all the roads, all the time."
- ODOT has developed an in-house Project Management System called "Ellis" that is quite unique. Named after Ellis Island because of its single point of entry, it was designed specifically with 11 protocols, or business rules, that identify what the agency is trying to accomplish so everyone is working from the same set of information. It links production and performance measures, providing checks and balances and forecasting results. Managers must put all data into Ellis for reporting purposes and use Ellis to manage. It is the backbone for planning, selling, and managing construction projects.



With the help of “Ellis,” a multi-year work plan can be developed and tracked and this is shared with the Ohio Contractors Association. Work plans are published and contractors know every project that will be bid for 06-07. Because they have published this information in advance, contractors have significantly more lead-time to plan. ODOT found this helped them to get more bidders and better prices. It also allows contractors to manage their workforce more effectively. They can decide if or when to lay people off. ODOT schedules the bid process during the winter months when contractors are not as busy and they find they are receiving better and more detailed bids. They are averaging 4.1 bidders per project.

“Creating the desire for continuous improvement...requires an environment in which people are motivated to improve the system and its products. This motivation comes from:

- A belief that the purpose of the organization is worthwhile
- An intrinsic desire on the part of people to improve
- A system that allows people to enjoy their work and to take pride in its outcomes
- An environment that provides the time for people to participate in improvement
- Recognition and appreciation of efforts to improve.”

*From “The Improvement Guide, A Practical Approach to Enhancing Organizational Performance,” by Gerald J. Langley, Kevin M. Nolan, Thomas W. Nolan, Clifford L. Norman and Lloyd P. Provost, Jossey-Bass, 1996.*

## Empowerment with Accountability

Sometimes organizations resist empowerment because they misunderstand it as a loss of control. Empowerment does not mean employees can do as they wish. It means they are empowered to make decisions in line with organizational goals and boundaries. When employees know what is expected of them and how success is defined *and* measured, they feel responsible for achieving the goals. Measures are an exacting way of holding people accountable yet gives them the freedom to make decisions and improvements in line with the goals.

✚ For **Florida DOT** accountability comes from its Five-Tiered Business Plan. Two Strategic Objectives Champions each month report to the Secretary on achievement of their measures of performance. Employees in each district or office know what needs to be done, but are empowered to develop their own standards to ensure quality.

✚ **New Mexico DOT.** In 2003, Governor Bill Richardson initiated a top-to-bottom performance review of state programs to develop a statewide focus on agency performance and accountability. All agencies are now expected to report their performance on an annual basis, and 15 have been singled out for quarterly reporting. A new database will track developments on a continual basis. Each performance measure is flagged as green, yellow, or red, indicating that progress on that measure is either on target, completed or deficient.

It is the mission of NMDOT's Quality Management Office to provide the department with the tools, resources and expertise to integrate performance accountability and results throughout the organization. Each office is asked, "What is your accountability within your office and how does that tie into 'Good to Great' and the Governor's expectations. As indicated under *Alignment* they invest in helping employees see how their job relates to the goals and measures.

A major accountability tool is the quarterly meeting to review progress toward goals and the four strategic priorities. The meeting is called "Trailblazers – Good to Great Management Accountability and Responsibility Meeting," with topics and a format that ask, "Are we going from Good to Great, and are we meeting our performance measures and other key performance indicators?" The status of every measure is available on the NMDOT website.

As Part of the Executive Office's accountability program, the department also uses Performance Based Budgeting to report on certain performance measures bi-monthly.



✚ **Ohio DOT** has probably one of the best and most mature systems in place for empowering employees and holding them accountable because of its sophisticated performance measures and cost accounting system. Employees are very clear about what they are being held accountable for. Additionally, it affects hiring and promotions. Managers are expected to hire the best because they know they are held accountable.

### TIP

- “We started instituting accountability in central office first because it gives credibility.”
- “Hire the right people and let them do their job.”
- “We got people believing they could make a difference and then it took off; then comes accountability.”  
– Gordon Proctor, Director, Ohio DOT

✚ The dramatic revitalization observed at **Virginia DOT** was attributed in part to organizational changes “to create clear lines of responsibility and accountability.” Prior to those changes, the *Washington Post* declared, “VDOT is in shambles with little credibility left either inside or outside the agency” (April 2002). In retrospect, part of the problem was that VDOT needed a “room full of people” to even assess project status. Questions about cost and completion dates were answered with “it will cost what it costs” and “it will be done when it’s done.” Even basic roles and responsibilities, such as the relative responsibilities of headquarters and the districts, were blurred.

The new Commissioner at VDOT clarified those responsibilities and made corresponding organizational changes. District Administrators, formerly three levels below the Commissioner on the organization chart, now report directly to the Commissioner. According to VDOT’s Larry Jones of the Management Services Division, the District Administrators “were invested with more decision-making authority. Likewise, they were held responsible and accountable for direct performance.”

By 2005 the *Washington Post* had a different view of VDOT: “With a smaller but abler workforce and with solid managers, the agency that used to promise projects it could not afford has improved its score ... VDOT is up to the job.” VDOT believes that most of the reasons for those improvements can be explained with three words: “**Responsibility. Authority. Accountability.**”

The VDOT Commissioner conducts videoconference meetings with the district administrators and project managers at least once a month to review performance. Face-to-face meetings are held at least quarterly.

New Mexico DOT holds quarterly “Trailblazer” meetings that ask, “Are we going from Good to Great, and are we meeting our performance measures and other key performance indicators?” These are “accountability and responsibility meetings.”

The discussion focuses on measured performance and on the status of specific projects. The reasons for any delays, cost overruns, or other deficiencies are discussed and remedies are prescribed. Responsibilities are clear, and accountability is ongoing and direct. The personal involvement of the CEO and the direct links to performance measures was cited as essential to success.

**TIP**

*Suggested reading:*

- *Encouraging the Heart: A Leader's Guide to Rewarding and Recognizing Others.* James M. Kouzes and Barry Z. Posner, Jossey-Bass, 2003.

**At VDOT:  
Responsibility  
Authority  
Accountability**

### 3. Leadership Implications

The primary purpose of this guide is to assist CEOs and senior leaders of transportation agencies in deciding how to increase organizational effectiveness. Our overall conclusion from the research is to create the conditions represented by the nine themes common to the ten DOTs reporting the greatest success in their organizational improvement efforts.

How best, then, to create these conditions? The fact that these agencies varied greatly in their programs and practices indicates substantial latitude in crafting an approach. However, if you are looking for a roadmap, we hope the following tips will help.

#### 1. Honor the past

As FDOT Secretary, Denver Stutler, said, “ I figured whatever my predecessors put in place was put there for a reason.” If you have a new agenda or ideas to change and make improvements, don’t discount what employees have worked hard on in the past.

#### 2. Coalesce your champions

Build your team; make sure you know who your supporters are and optimize that support.

#### 3. Define success

The first questions you have to answer are, “How will you define success and how will you know when you have achieved it?”

#### 4. Assess where you are and define the gap between current state and your definition of success

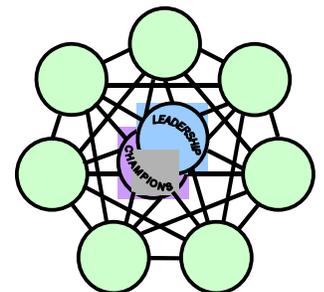
When you have defined success, how will you know how big a gap there is between current reality and desired state? Assessing the current state will provide guidance in determining strategy to achieve the desired state.

#### 5. Benchmark

As you have done with this guide, find out what others are doing and emulate best practices. Don’t limit yourself to DOTs. Other agencies can be just as useful.

#### 6. Start with a few measurable goals

Rome wasn’t built in a day. Define key goals and start with low hanging fruit. Success begets success. The most important thing is to focus and act. As Pablo Picasso is quoted, “Action is the foundational key to all success.”



7. *Build alignment for these goals both internally and externally*  
Be visible, use your Champions, and sell the benefits.

8. *Dialogue with employees and constituents, and listen*  
Invite all points of view.

9. *Create a culture where employees look to continually improve*  
Recognize and reward improvements and innovations. Learn from failures.

10. *Use measures to empower employees yet hold them accountable*  
Make sure people are clear about what is expected of them and how their work will be measured and evaluated or, put another way, how they will know success personally. Then, let them do their jobs.

11. *Stay focused on your priorities.*  
Stay the course. As Ross Perot said, “Most people give up just when they’re about to achieve success. They quit on the one-yard line. They give up at the last minute of the game one foot from a winning touchdown.”

12. *Invest in the future*  
Balance the short term with the long term. You may be in this game for a short time, but the game will continue and the legacy you leave will be important to the future success of the agency.

We have presented these leadership implications as a series of steps, and though the way they unfold is somewhat chronological, it would be a mistake to work through the steps in a strictly linear fashion. Benchmarking, for example, is often helpful in the course of defining success, establishing performance measures and creating assessment methods.

Most importantly, incomplete steps should not delay progress on the other steps. If the measures of success are less than perfect, as Pete Rahn realized at MoDOT, move ahead with dialogue and building alignment, planning to revisit the measures along the way. We believe this approach to be essential because of the need to get all of the particles of the atom created and working in equilibrium. If one or two are missing, sustainability is seriously threatened, no matter how perfect the remaining particles.

*“Far better is it to dare mighty things, to win glorious triumphs, even though checkered by failure... than to rank with those poor spirits who neither enjoy nor suffer much, because they live in a gray twilight that knows not victory nor defeat.”*  
Theodore Roosevelt

## A CASE IN POINT

“It was a wake-up call,” David Comstock replied, recalling the time that the senior leaders of the Kansas Department of Transportation (KDOT) first heard of the legislative proposals that would transfer vital aspects of KDOT’s authority to local government. “It told us we were out of touch with our customers and it was time to change. That was three years ago and now KDOT is on a much different, and much better, path.”

In one of the telephone research interviews for this project, David Comstock, Director of Engineering and Design, and Julie Lorenz, Director of Public Affairs, told the story of how KDOT’s change initiatives got a kick-start. They said KDOT was fortunate that, at the same time expectations of KDOT’s stakeholders were shifting, a dynamic new Secretary, Deb Miller, was appointed.

Deb Miller’s first step was to call for “a top to bottom review” of the department that included a customer satisfaction survey and both internal and external stakeholder focus groups.

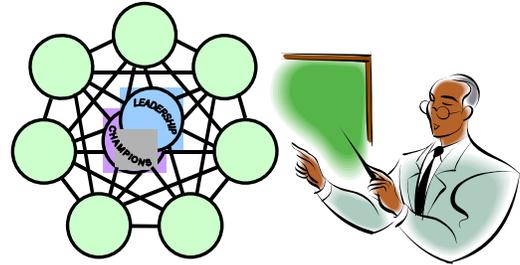
This *look in the mirror* sparked the other themes to take shape. “What’s been flowing from that,” Julie said, “is really about changing our culture. The stakeholder survey said we have an excellent physical system but a need to be more responsive to customers. We ranked lowest with city and county officials who wanted, for example, to be more upstream in development.”

Findings like these from the review led to new *measures of success*. “We established new performance measures,” David said, “expanded to include stakeholder perspectives.”

“Expanded, yes, but also more focused,” Julie added. “There are high-level measures and constant attention is given to ones that reflect our top priorities.”

The ways in which priorities are now determined represent one of the greatest departures from the past. They are the result of a few key *dialogue* processes that create *alignment* on the priorities. “For example,” David explained, “in the way that priorities are made to select projects, we’ve added a local consult process, rather than relying only on our traditional, ‘sacred’ formula.”

“The local consult process is a great example of the many practices that are part of what we call the ‘Partnership Project,’” Julie added. “The Partnership Project goes beyond changing the ways we work with locals to include issues about making sure KDOT is a great place to work and



*“Over the years, I’ve been through MBO and TQM and the like, but they didn’t stick because the structure and process were lacking that would make sure people did what these programs called for. We knew in those days we could just wait it out, and so we did.”*

-- David Comstock, P. E.  
Kansas DOT  
Director, Engineering  
& Design

discovering opportunities for greater efficiency. All these things have to work together. To make sure they did, David had the terrific idea of creating a Board of Directors.”

The Board of Directors includes a few internal *champions*, and also a City Engineer, a newspaper publisher, and a Highway Advisory Commissioner. While the Board is valuable for its guidance board, the process of regular meetings sets a strong expectation of progress, helping assure that KDOT *takes care of business* and assures *accountability*.

“I felt something like the Board was needed to maintain the momentum of the Partnership Project, and it looks to be working out that way,” David explained.

Julie and David pointed out that KDOT is still in the early stages of its significant organizational change, but they are confident they are on a successful, and irreversible, path. So the last interview question asked for their retrospective on what it takes to get on the right path.

“Leadership and structure,” they agreed.



“Organizational changes obviously require leadership... but you don’t overlook the most fundamental component. To be effective, organizational change needs to bring the organization into greater alignment with external conditions or the change won’t succeed in the long term. What we’ve done through the Partnership Project is to listen carefully to internal and external forces so that our changes increase our alignment, which create a stronger organization and a culture that can succeed in the future.”  
-Deb Miller, Kansas Secretary of Transportation

## 4. SHOWCASE OF EXEMPLARY PROGRAMS AND PRACTICES

Many exemplary programs and practices were discovered in the site visits that did not quite fit into the operational definition used for this project, i.e. “programs and practices that DOTs are using, affecting the entire organization, to achieve high performance and organizational improvement,” or that did not match with the themes common to all of the departments. However, many of these programs and practices were impressive and of great benefit to their respective departments, and so will be of interest to other departments searching for best practices. Therefore, this chapter showcases programs and practices that are not described in preceding chapters and a few that are briefly mentioned but warrant elaboration.

### Arizona DOT

#### Partnering

The term “Partnering” has grown to have a much broader meaning in ADOT than in most other transportation agencies. ADOT has been in the forefront of partnering with highway contractors for major construction projects since the early 1990s, and the department continues to lead in the development of partnering processes and tools for on-time and on-budget delivery of major projects, with fewer conflicts, claims, and other adversarial outcomes. However, ADOT has also used the underlying concepts of partnering as the foundation for team-based improvements in many different aspects of the department’s business. Its philosophy is that much of the work of DOT is accomplished by varying combinations of stakeholders who have wide-ranging interests, so a formal partnering process serves to assure strong and productive relationships among them and to prevent or give early warning to potentially costly schedule, budget or quality issues.

ADOT’s belief that partnering practices more than pay for themselves appears well founded. The following table gives the highlights of the impacts of partnering on incidents of mediation, arbitration and litigation in construction projects over the past 15 years as compared to the baseline year of 1991, which was prior to adoption of partnering practices.

**Table 4.1: Mediations, Arbitrations and Litigations in Construction Projects Before and After Adoption of Partnering Practices**

	1991 - 92	1996 - 2006
<b># of Incidents</b>	60	6
<b>Costs</b>	\$ 39,800,000	\$ 1,275,812

In addition to a dramatic reduction of incidents and associated costs, ADOT has identified additional savings in their construction projects to include:

- \$20.3 Million Construction Engineering Savings
- \$9.4 Million Construction Value Engineering Savings
- 12.7% Average Time Saved
- 24,677 Contract Days Saved

Partnering is standard practice throughout ADOT, not just applied to construction projects. Key accomplishments of ADOT's Motor Vehicle Division are a result of multi-party partnering and are described later in this section.

Since partnering is essential to ADOT's overall way of doing business, the department has a separate Partnering Office under the Communication and Community Partnerships Division. The Partnering Office provides a wide-range of services, including the design and quality monitoring of partnering workshops, management of partnering workshop facilitator services, educational programs and resources, and tools that enable stakeholders to evaluate the progress of their partnership on a continuing basis (see the PEP program described in the "Looking in the Mirror" section).

### **ADOT Motor Vehicle Division (MVD) Third Party Program**

The Motor Vehicle Division (MVD) in ADOT has implemented a multi-faceted, multi-partner program that enables its customers to do business at convenient locations. More than 60 private companies operate as agents for the MVD and are linked directly to the MVD database. Approximately two-thirds of these companies serve the general public, such as car dealers, car auctions, rental car companies, and other small businesses. The other one-third are businesses with their own fleets of vehicles or associations of automobile and trucking companies. IBM developed and supports the IT system, including the online system that allows the public to carry out basic transactions from any computer.

The primary driving force for these innovations was that customer waits in MVD offices had reached intolerable levels, up to 5-6 hours. Those waits have now been reduced to minutes. Virtually any title or registration transaction can be handled without delay; and ADOT's ServiceArizona website now provides convenient access to other services, including voter and organ donor registration and access to the National Insurance Crime Bureau (NICB) database of vehicles and watercraft affected by Hurricanes Katrina, Rita and Wilma.

MVD leaders describe their three guiding principles as:

- Find ways to improve products and services
- Think of how to make the process work, not reasons why it won't work
- Consider third parties as partners, not adversaries

They believe that the MVD's role has "evolved beyond service providers to process managers and enablers."

**SERVICEARIZONA**

- Vehicle Registration Renewal
- Renovación de Registro de Vehículo
- Restricted Use 3-Day Permit
- 30-Day General Use Customer Permit
- Personalized/Special Plates
- Plate Refund
- Fleet Registration Renewal
- Motor Vehicle Record
- Address Change
- Duplicate Driver License/ID
- Duplicate Vehicle Registration
- Voter Registration
- Driver License Reinstatement
- Plate Credit
- Sold Notice
- Vehicle Fee Recap

**FEATURED LINKS**

- Organ Donor
- Veteran's Plate
- Vehicle De-Insured Certificate
- EZ Dealer Services
- National Insurance Crime Bureau
- Fleet Application
- Roadway Info

**INFORMATION**

- Arizona @ Your Service
- MVD Home Page
- ADOT Home Page
- Nearest Offices
- What's new at ADOT

IBM

**ADOT**

- Vehicle Registration Renewal
- Renovación de Registro de Vehículo
- Restricted Use 3-Day Permit
- 30-Day General Use Customer Permit
- Personalized/Special Plates
- Plate Refund
- Fleet Registration Renewal
- Motor Vehicle Record
- Address Change
- Duplicate Driver License/ID
- Duplicate Vehicle Registration
- Voter Registration
- Driver License Reinstatement
- Plate Credit
- Sold Notice
- Vehicle Fee Recap

## Group Facilitation

The Organization & Employee Development (OED) section in ADOT assists the department with group facilitation in two ways. First, OED provides training for ADOT employees who need facilitation skills. The training is progressive and is adapted to fit the person's background and strengths. Second, ADOT units that need a trained facilitator can contact the OED section and be matched with a person who has the appropriate skills and experience.

The program recognizes that different types of teams and different situations call for different skill sets, and ADOT defines five different levels of Facilitator Competency, as shown in the chart below.



In addition, the department has adopted a thorough and easily understood Facilitator Competency Matrix that “serves as the standard for selection, training and development of Team Facilitators at ADOT. It provides an overview of the facilitator role, and gives detail on the experience, attributes and skills required for the various levels of facilitator services.” Facilitation services are particularly important to ADOT given its extensive reliance on partnering as a way of assuring teamwork and strong business relationships that lead to quality results.

## “Quiet Pavement”

ADOT, like many other DOTs, has experimented with rubberized asphalt to improve pavement performance and as a beneficial use of “crumb rubber” from discarded tires. However, another benefit of rubberized asphalt is a smoother and quieter ride, and ADOT is in the midst of a multi-

year “Quiet Pavement” program, including the use of rubberized asphalt overlays on new concrete pavements. For the purposes of the organizational improvement research, this is significant not just because of the engineering innovation but also because ADOT is responding to the desire of motorists and neighbors to reduce the noises caused by freeway traffic on concrete pavement. (ADOT reports noise reductions in the range of 50% to 75%.) Further, ADOT worked closely with the MPO (Metropolitan Planning Organization) and area cities to allocate the necessary funds because most of the quiet pavement improvements will be on approximately 115 miles of Phoenix-area freeways.

## Florida DOT

### Core Leadership Competencies

FDOT has developed and embraced leadership competencies as essential to organizational success. The Leadership Core Competencies describe skills needed by members of the Department of Transportation’s leadership team. The department expects members of the leadership team to provide strategic guidance for the organization and these competencies reflect that expectation.

The five fundamental leadership competencies that the department adopted are:

1. Leading People
2. Leading Change
3. Communications and Building Coalitions
4. Business Judgment
5. Results Driven

These competencies were designed to assess leadership potential and experience, rather than technical expertise. Technical expertise is also necessary to ensure successful accomplishment of job duties and responsibilities.

The Leadership Core Competencies are used to select, assess, and develop the performance of the individual members of the leadership team. Individual Development Plans are driven by assessment of these competencies.

The basic definition for each competency is supplemented by key characteristics, which reflect possession of the leadership competency. These characteristics more fully describe the attributes the department believes are critical to the success of the organization. It is understood that not all candidates for leadership positions will possess every key characteristic. However, it is expected through training and development that these characteristics can be strengthened to ensure success.

## Maryland SHA

### Traffic Safety

MDSHA's District 4 Traffic Safety Team won AASHTO's National President's Transportation Award in the Quality category in 2005. The Team identified and analyzed 13 of the most dangerous intersections, determined appropriate remedial action and decreased the accident rate by 56%. The team focused on the predominant accident type and pattern to identify improvements that would have the greatest potential for reducing the accident rate. They reviewed accident reduction factors associated with a particular type of safety countermeasure in order to determine what safety countermeasures to consider. When geometric improvements were identified, a rating form was completed for each project to help determine the priority of the projects for funding. The forms included information relating to the amount of accident reduction expected, anticipated benefit/cost ratio, and bonus capacity improvements expected.

### Leadership Competencies

MDSHA has defined competencies and qualities for leadership. Currently these competencies are used as a coaching tool for senior managers to work with their direct reports when developing their Professional Development Plans for the year. From the Professional Development Plans, SHA's Learning Management System picks up the training needs managers require to develop these competencies and incorporates that training into their MDSHA University. Supervisory and management development programs are based on the identified leadership competencies. Plans are in process to use these competencies for succession planning and promotional opportunities.

## Michigan DOT

### Transportation Technology to Improve Processes: TransTIP

The Michigan Department of Transportation's Performance Excellence Division has developed a structured process to assist teams and to educate the organization on process improvement practices. Teams are coached through the improvement process and taught quality improvement techniques. They have found that after teams go through the structured process they then tackle some improvement opportunities on their own. Teams taking on larger cross-functional problems tend to come back to the Performance Excellence Division for facilitation. The TransTIP process is based upon the following:

#### TransTIP

- Commitment to significant change
- Customer needs driven
- Focus on key processes
- Redesign entire process across functions
- Analysis by participants
- Redesign by participants
- Implementation by participants
- Customer-based process measures

Each process improvement must have a sponsor who authorizes and allocates resources for change, which includes people, budget, and time. The sponsor is a “barrier buster” and motivates and inspires the team.

The Performance Excellence Division provides a performance consultant for a four to five day customized workshop during which time the team analyzes the current process, redesigns the process, establishes new process performance measures, conducts a walk-through with Process Customers, and develops an implementation plan. The new process, the implementation plan and recommendations are presented to the sponsor.

## Missouri DOT

### Human Resource Development Programs

The comprehensive approach to employee dialogue shepherded by Missouri DOT’s Human Resources Employee Development Division (HRED) is described in the previous chapter, but some of MoDOT’s other human resource programs and practices are also exemplary.

The department has human resource staff in each of the ten district offices, and both the headquarters and district HR offices are proactive in seeking the involvement of field personnel in developing training programs, solving day-to-day human resource problems, and addressing human resource issues. Annual reviews of HR policies are held with supervisors statewide.

MoDOT has an extensive technical training program for operations staff that includes 31 instructor-led courses and 3 on-line courses. HRED developed its first MoDOT-specific instructor-led course, *Dump Truck Operation*, in 1998, and new courses are developed continuously in response to needs identified in the field.

To illustrate, the Post-incident Bridge Inspection Training (PIBIT) course was developed because of the state’s vulnerability to earthquakes along the New Madrid Fault. System Security Awareness for Transportation Employees was in response to 9/11, and allows MoDOT employees to be effective “eyes and ears” in their own communities. Work Zone Technician addresses the concerns that all DOT workers have for work zone safety. The HR division has five Performance Analyst/Facilitators who develop the modules with the assistance of subject-matter expert teams and MoDOT’s two Videographers.

Another notable program is the development of *Career Ladder Checklists*, which identify the courses and certifications that employees must successfully complete to become eligible for certain promotions. This tool helps supervisors ensure their staff has the knowledge and skills to be successful in their current positions, while providing them with a plan to develop employees to perform advanced job duties.

MoDOT has a cooperative program with Lincoln University to increase enrollment and eventual graduation of African American students with a bachelor’s degree in computer science and business administration. Graduates are placed in professional positions within MoDOT. In 2004, the program was expanded to include criminal justice, pre-engineering, and civil engineering technology majors. Since its inception, 16 students from Lincoln University have participated in

the program, 8 have graduated and 7 of those who have graduated are currently working for the department. The other 8 are still enrolled in the program. The department also recruits students from other Missouri universities.

A new initiative for the HRED division is to provide “full-service” support for supervisors in recruiting and hiring new employees. A pilot program is underway with HR staff in the central office providing a full range of services for supervisors who need to fill vacant positions—explaining the required processes and answering questions, obtaining lists of qualified applicants, assembling information about the persons to be interviewed, scheduling interviews, sitting in on interviews, handling the paperwork, and processing all of the necessary documents for hiring.

### **Practical Design**

MoDOT has launched a program known as “Practical Design” to focus the department’s attention on cost-effective design and the needs-vs.-funds problem shared by most DOTs. The department is addressing those issues through its “Practical Design Implementation Manual,” and the early results are promising. Project costs have been reduced, and the savings have been transferred to other needed projects within the same overall budget. MoDOT leaders believe these savings have been accomplished without compromising safety or increasing the life cycle costs of individual projects. Practical design decisions have also been made in a collaborative manner with MoDOT’s customers and with its partners in the consulting and contracting industries.

The introduction to the implementation manual for Practical Design includes this explanation:

“Practical Design challenges traditional standards to develop efficient solutions to solve today’s project needs...MoDOT’s goal of Practical Design is to build ‘good’ projects, not ‘great’ projects, to achieve a great system. Innovation and creativity are necessary for us to accomplish Practical Design...We must properly define the scope by focusing on achieving the project purpose and need while considering the surroundings of each project. Our goal is to get the best value for the least cost.”

The manual also includes the following:

“The next step in implementing Practical Design is adopting new policies in areas most effecting our improvement costs. These areas are known as “cost drivers”. Reducing costs in these key areas, while still serving motorists’ needs, will enable us to construct more projects, thus better serving the taxpayer.”

### **New Hampshire DOT**

#### **Maintenance Activity Tracking System (MATS)**

The New Hampshire Department of Transportation shares the MATS software with the states of Maine and Vermont. It is a managerial tool used to determine how much is being invested in time and expenses for maintenance and gives them a good handle on expenditures. The maintenance crews enter information on laptops at the end of each workday. The information is

used for processing payroll as well as for tracking expenses. The system was piloted in one of the six districts and was well accepted by the crews. Implementation went smoothly except for a few equipment and technical problems. It is expected to be rolled out statewide in the near future.

## New Jersey DOT

### Hyperbuild

The premise of Hyperbuild is that traffic congestion costs the public in lost time and wasted gasoline. Construction projects that are vital to the smooth flow of traffic must be completed quickly with minimal public inconvenience. The goal is to approach problems with a strong sense of urgency and a degree of impatience. Hyperbuild is about using the latest in technology for project delivery, minimizing traffic disruption, reducing congestion time and cost, minimizing environmental impacts, and improving constructability and quality. The solution might be innovative construction methods or it might be answering the question, “what can we get done if we can’t do it all?” An example of a Hyperbuild project is pre-cast bridge construction. NJDOT replaced an existing bridge in three weekend closures. The NJ goal is to expand this crisis mentality to other capital projects. The challenge is that it requires other parts of the organization to shift their ways of thinking as well. For instance, they had to figure out how to pay people for around-the-clock work.

### Pipelines/Project Management

In 1995 the NJDOT Commissioner authorized a study of the department’s capability to meet its mission. One outcome of this study was to streamline the Design side of operations through the consolidation of regional functions and the establishment of a project manager as a single point of contact for each capital project. This resulted in more timely delivery of projects. NJDOT began its Project Management Improvement Initiative in 2004 by establishing the Division of Project Management and the Project Management Office. It developed a project management process to manage large construction projects. Realizing that not all projects needed to follow all of the steps of the process, projects were sorted by degree of complexity, which was soon organized into four categories called “pipelines.” The pipelines are:

1. Mega Projects
2. Smaller projects requiring utility and environmental studies
3. Quick projects requiring minor permits that can move right to the final design stage
4. Small projects like re-striping that are sent to operations.

In addition, NJDOT changed its project management structure so that one individual oversees all of the category 3 projects around the state. The other levels of projects are managed by individuals in one of the three geographic regions NJDOT established to define the state and the work.

### Circuit Riders

Recognizing the importance of work zone safety, NJDOT developed an interesting strategy to promote safety. The focus is on short term/intermediate work zones established on a state highway by in-house maintenance forces or other organizations such as utility companies or

contract surveyors. Three Circuit Riders, as they are called, visit work zones and roadway operations on a daily basis. They provide on-site training on topics such as how to work safely around traffic and proper traffic control techniques. The Circuit Riders are trained in OSHA and MUTCD (Manual on Uniform Traffic Control Devices) standards and hold principal and senior safety inspector titles. They have the authority to stop any job that would place someone in an immediately dangerous position.

### **Succession Planning**

NJDOT identified that 28% of their assistant commissioners and directors are eligible to retire. To address this drain of knowledge and skill, it has developed a succession planning program that identifies and creates a “leadership pool.” There are currently 54 DOT employees in the pool.

Participants create an individual development plan based equally upon 360° feedback and the Managerial Assessment of Proficiency (MAP), a video based assessment instrument the agency purchased. The 360° degree feedback process provides a subjective snapshot of how pool members are perceived by coworkers.

Participants and the NJDOT, Bureau of Succession Planning, sign a “Covenant” containing 34 commitments, 17 for participants and 17 for the Bureau of Succession Planning. The following are examples.

#### **The Bureau of Succession Planning (SP) will support pool members by:**

- ✓ Providing opportunities for increased visibility
- ✓ Publicizing the list of SP pool members in appropriate forums
- ✓ Brokering assignments for leadership/management growth and development
- ✓ Coordinating networking meetings with the Deputy Commissioner and Assistant Commissioners
- ✓ Offering 1 on 1 coaching
- ✓ Updating and keeping members’ portfolio on file

#### **Individual commitment to Succession Planning includes:**

- ✓ Participating in 360° assessments and MAP with related debriefs
- ✓ Creating IDPs and periodically updating them
- ✓ Making SP aware of career changes (laterals, mobility assignments, promotions, etc.)
- ✓ Participating in the Mentoring Program as a development opportunity
- ✓ Keeping SP up-to-date on personal long range career goals
- ✓ Being an ambassador for Succession Planning in the department

The graduate group includes seven NJDOT employees who have reached a director title or above since participating in the program. Their motto is “graduation with obligation.” Succession Planning is an iterative continuous development process.

## **New Mexico DOT**

### **District Six Safety Awareness Campaign**

In 2005 District Six in NMDOT reduced injuries by 54.5% from 2004 and had zero lost time accidents. That is approximately 450,000 man-hours with no lost work due to injuries and only 5 minor injuries compared to 11 injuries in 2004. They attribute these results to four safety awareness programs they put in place.

1. All accidents are reviewed by a committee that specifically searches for root causes and then makes recommendations for each.
2. All accidents are categorized and distributed to all employees for awareness.
3. Safety liaisons representing each crew meet regularly to discuss safety and share improvement strategies.
4. A safety awareness campaign that promotes the safety strategies of 53 employees who have been accident free for 10 years.

### **Early Return to Work Program**

NMDOT's focus on safety includes an "Early Return to Work Program" that has been a nationally benchmarked program. The underlying philosophy of this program is that if an incident involving Workers Compensation happens it is a "failure of process not of people...[we] make sure the employee's rights and our rights are protected."

NMDOT describes its approach to incidents as "best faith efforts" that ensure prompt and proper medical care. Unless there are blatant indications to the contrary, incidents are assumed to be work-related and medical care is provided immediately, rather than waiting the allowable 15-day determination period. If an incident is determined not to be work-related, which typically takes 14 days, treatment payments stop and NMDOT has incurred costs for which it was not liable. These costs, however, have proven to be far less than the cost of staff time dealing with legal proceedings. NMDOT has not had a court hearing in over four years.

Immediate treatment also means faster recovery, lower total payouts, fewer lost workdays, and higher employee morale. In addition to prompt medical treatment, every effort is made, even to the point of redesigning jobs, to return the employee to work as soon as possible.

## **North Dakota DOT**

### **Mentoring Opportunities**

NDDOT is in the fourth year of its structured mentoring system, which it deliberately chooses not to call a program. Patterned after the Montana-Dakota Utilities program, NDDOT believes that mentoring is a process and has partnered with Bismarck State College to help facilitate the kick-off session and the delivery of mentor training. Mentors and mentees both volunteer to participate and everyone is accepted. The Director and his assistants participate as mentors, demonstrating a significant commitment to employees and to the mentoring system. The structured process lasts for one year and includes:

- a kick-off meeting with speakers and training for both mentors and mentees;
- an agreed upon number of meetings during the year;
- other training opportunities; and
- a closing celebration and luncheon.

In the first year there were 12 pairs participating and this year there are 30 pairs for a four-year total of 73 pairs.

### **Succession Planning**

In 2003, NDDOT targeted high level positions, division directors, district engineers and executive managers, that will need to be filled in the near future. Job descriptions that included duties, education, work experience, knowledge, skills, abilities, and required certifications and licenses were written and published for each position. Employees were invited to complete an interest survey indicating the position(s) of interest and submit a draft development plan that would help them prepare to qualify for the position. Fifty-six individuals expressed an initial interest and 30 submitted draft development plans.

A committee, set up for each of the identified positions, reviews the interest surveys and development plans. The committees decide if an individual meets minimum qualifications and, if so, make recommendations for the development plan that will enhance the individuals' preparation for the position. The preparation time is then estimated.

Individuals are responsible for their final plan development as well as the implementation of their professional development plan. They are encouraged to volunteer for the Mentoring Opportunities and/or find an informal mentor.

## **Ohio DOT**

### **Highway Technical Academy**

ODOT's value of "agility" applies to everything they do. Currently, 2,200 highway workers and construction inspectors are being trained in a rigorous, formal process to certify them as flexible Highway Technicians. These Technicians will be certified as being competent in basic roadway maintenance, snow and ice treatment and basic project inspection. This flexibility will enable ODOT to have a workforce responsive to meet the diverse needs of the department. As the size of the construction program rises and falls in various districts, as snow and ice needs vary with climate and as seasonal maintenance needs arise, ODOT will have a core of well-rounded and well-trained employees to meet these demands.

To accomplish this goal ODOT first created a broadband classification, Highway Technician 1 through 5, to replace more restrictive, less flexible classifications. Next, 45 courses were developed and subject matter experts from within the department provided the cross training. The training was pilot tested with all managers to be sure that everyone was on the same page. Some employees were having trouble with the math that was required, so a mobile classroom was added to the program to provide pre-math and tutors were hired to meet with individuals who could not pass the tests. ODOT believes it is in the department's interest if everyone can pass the tests and move to the next level in the classification. The program includes physical

agility tests in addition to tests on the coursework. Content testing is done on-line with randomly scrambled questions. Employees participate in training and then take a test to move up through each of the first three levels of the Highway Technician classification. The fourth and fifth levels are posted and people must apply and interview to compete for positions.

Employees were allowed to choose not to receive cross training, but in making the choice to remain in their current classification, they recognized their rate of pay would be frozen. Employees are beginning to appreciate the career path afforded by the new classification. The mentality that goes with more restrictive job classifications is also changing. They have changed from saying “I’m a project inspector, I can’t plow snow,” to a willingness to do whatever it takes to get the job done.

ODOT has seen positive results from this initiative. Attrition is less than 6%. Sick leave usage and Workers’ Compensation costs have gone down.

### **“Entrepreneurial Fiscal Structure”**

The Funds Management Committee is an advisory body created by the Director in 2001 that makes fact-based recommendations to the Director on how the department can best allocate available funding based upon the conditions and needs of Ohio’s transportation network. The committee is made up of rural and urban district deputy directors, central office deputy directors from five key areas, and two central office program managers. District budget committees develop presentations on their budget needs. The committee reviews data and recommends funding for all highway capital programs based upon three scenarios: the expected funding level, the expected level plus 20%, and the expected level minus 20%.

After allocation, the district and county managers are given fiscal autonomy for managing their budgets and they are held accountable for accomplishing their capital and maintenance goals. The more they save on operations the more they have for capital projects. They have also instituted a loan application process that allows one district to borrow funds from another.

ODOT has done away with the “use it or lose it” mentality. The department sought and received legislative approval to allow districts to carry over funds from one year to the next. These funds cannot be used for payroll but can be used for capital projects.

*“The entrepreneur shifts economic resources out of an area of lower and into an area of higher productivity and greater yield.”*

J. B. Say, French Economist

## **Virginia DOT**

### **Knowledge Management**

VDOT recently created a Knowledge Management Division, driven in large part by the combined effects of retirements and downsizing. The new division’s challenge is to develop knowledge management methods and procedures and support services on a department-wide basis, while at the same time meeting the urgent needs of units such as Right-of-Way and

Utilities that are rapidly losing the knowledge and experience of large numbers of managers and employees at all levels.

The new division has three units: the Knowledge Management Office, the Virginia Transportation Technology Transfer Center, and the VDOT Research Library. The Knowledge Management office “creates and fosters internal networks of experts on a subject, called ‘communities of practice,’ to promote efficiency and to ensure consistency of best practices throughout the agency.” The Virginia Transportation Technology Transfer Center is Virginia’s Local Technical Assistance Program (LTAP). The VDOT Research Library “promotes research excellence and innovation by helping employees locate the right information at the right time in the right format and helps them use that information to create new knowledge and improved technical services.”

The Knowledge Management Office has 21 “communities of practice” underway and two under development. The topics are as diverse as right-of-way and utilities, construction quality, and historic truss bridges. One of the groups includes external partners. Another includes VDOT retirees. In a community of practice, the group shares expertise, identifies work issues, and collaborates on solutions. The office is also using social network analysis software for “knowledge mapping,” to help identify key relationships and develop ways to maintain that information flow even with different incumbents.

"About 28 percent of VDOT employees will be eligible for retirement in the next five years, and former employees hired back as contractors are approaching second retirements. Preventing a knowledge drain is a major challenge..."

--Maureen Hammer, Director, Knowledge Management Division (taken from a VDOT newsletter)

### **Innovative Project Delivery**

VDOT has established another new organizational unit with a title that is virtually self-explanatory—the Innovative Project Delivery Division. That Division is responsible for developing and implementing a statewide program for project delivery using design-build, the Virginia Public Private Transportation Act of 1995, and other innovative contracting methods. The Division is also responsible for “oversight of consultant procurement policy establishment, compliance, and guidance” and for support of other high-level state and private sector partnerships, including initiatives from the Governor and General Assembly.



**Project Monitoring and Management**

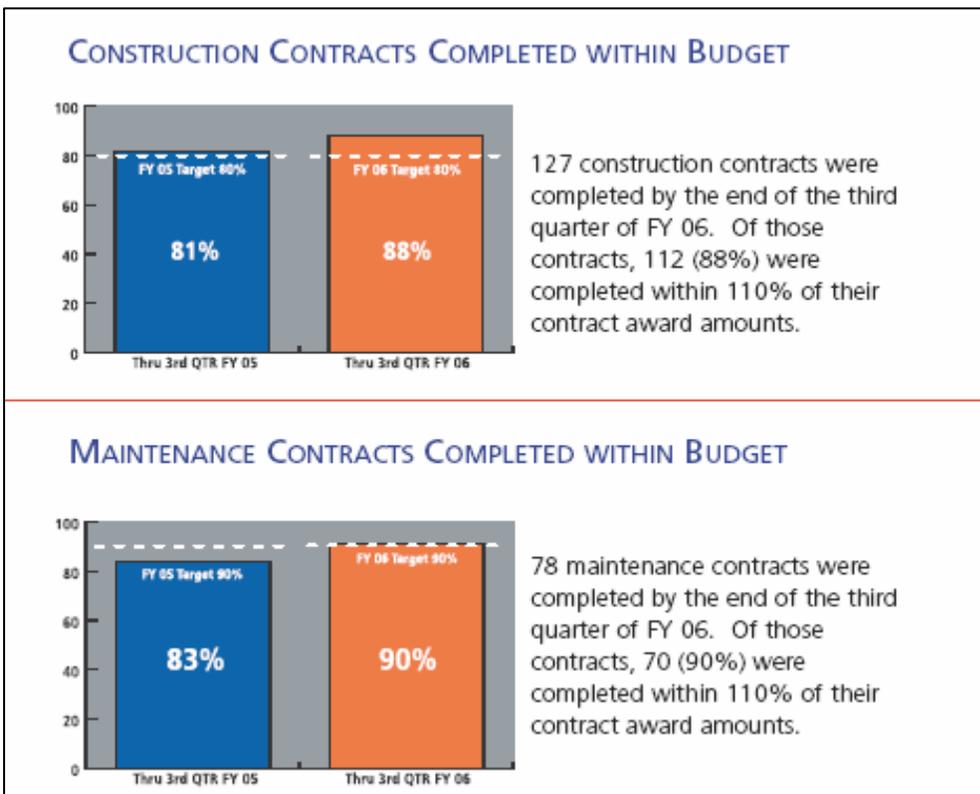
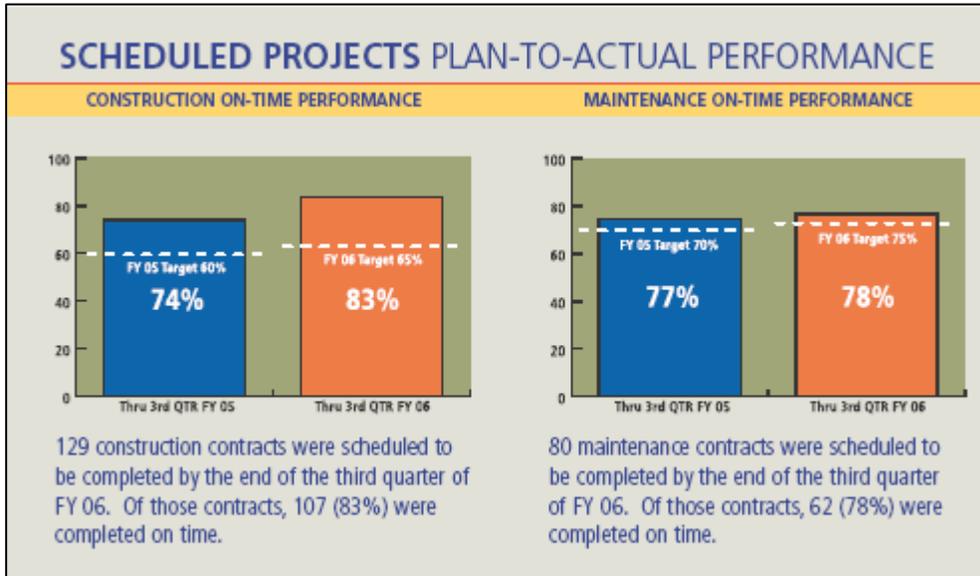
The VDOT Dashboard is described in the preceding chapter, emphasizing performance measurement and accountability. However, VDOT has two other tools that are used in combination with the Dashboard for monitoring and management of construction and maintenance projects. The VDOT Watchlist uses the same IT framework as the Dashboard, but is for internal use. The Watchlist allows the user to drill down to individual contract detail, including contractor and project manager information. The Watchlist is constantly available and used as a management tool at all levels of the department. It is the focal point for regular meetings with the Commissioner, Chief Engineer, and District Administrators.

Virginia Department of Transportation We Keep Virginia Moving									
Dashboard Watch List									
Fiscal Year: <b>FY2005</b>		Contract Type: <b>Construction</b>							
Construction Contracts Scheduled to be Completed in FY2005									
District	Total	Target (80% of Total)	Forecast	Completed Contracts		Active Contracts		Not Started Contracts	
				Late	On Time	Late	On Time	Late	On Time
Bristol	38	28	34	0	7	4	27	0	0
Culpeper	14	8	13	0	5	0	8	0	0
Fredericksburg	6	4	4	0	1	2	3	0	0
Hampton Roads	9	5	6	0	2	0	7	0	0
Lynchburg	19	11	17	0	3	0	14	0	2
NOVA	11	7	11	0	4	0	7	0	0
Richmond	21	13	17	0	5	3	13	0	0
Salem	19	11	17	0	2	2	15	0	0
Staunton	10	6	8	0	2	0	8	0	0
<b>Total</b>	<b>147</b>	<b>88</b>	<b>127</b>	<b>0</b>	<b>31</b>	<b>11</b>	<b>103</b>	<b>0</b>	<b>2</b>
FY2005 Construction Contracts that have not missed the Original Completion Date (Active/Not Started On Time)									
District	Total	On Schedule	Active Contracts				Not Started Contracts		
			1-10 Days Behind Schedule	11-30 Days Behind Schedule	1-12 Months Behind Schedule	1 Year or More Behind Schedule			
Bristol	27	27	0	0	0	0	0		
Culpeper	8	8	1	0	0	0	0		
Fredericksburg	3	3	0	0	0	0	0		

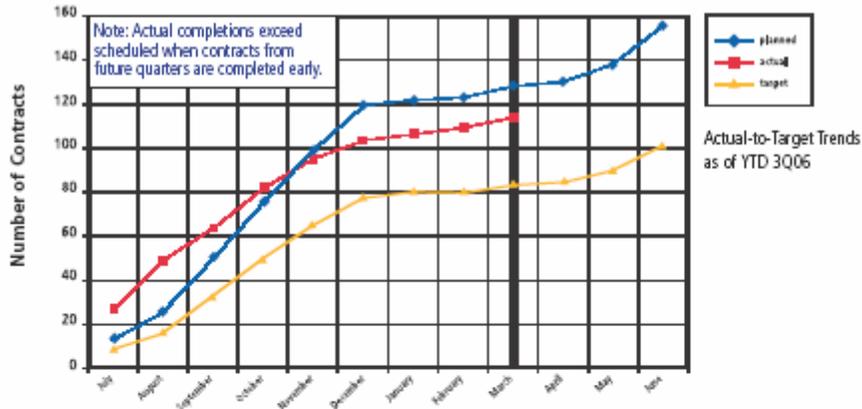
The third component is the Quarterly Report Card, which is submitted to the Commonwealth Transportation Board, distributed to various elected officials, and posted on the department’s website. This two-page report provides narrative highlights and a set of charts and graphs that depict on-time and on-budget performance for VDOT’s construction and maintenance contracts for the most recent quarter, the same quarter in the preceding year, and the most recent 12

months. Together the three tools, the *Dashboard*, the *Watchlist*, and the *Quarterly Report Card* provide information for key stakeholder groups and help VDOT ensure effective project management.

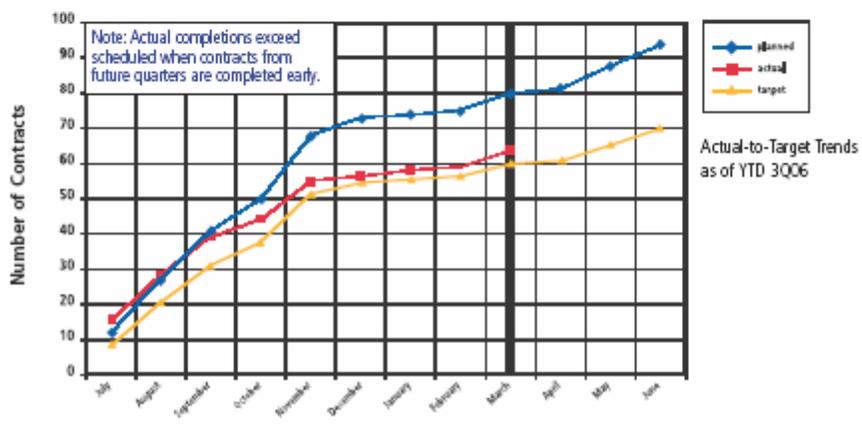
**Excerpts from Quarterly Report Card, Third Quarter 2006:**



### FY06 CONSTRUCTION CONTRACTS COMPLETED (ON TIME)



### FY06 MAINTENANCE CONTRACTS COMPLETED (ON TIME)



## 5: Summary and Analysis of Survey Results

This section presents a summary and analysis of the responses of the 45 departments of transportation (DOTs) that completed the *Survey of Organizational Improvement Programs and Practices*. A copy of the survey is presented in Appendix A, together with an aggregate of all responses to each survey item. This section will focus on the results for the principal objectives of the survey which were to:

- Document the types of programs and practices that DOTs are using to achieve high performance and organizational improvement
- Establish a reference database of programs and practices with proven success in increasing the organizational effectiveness of DOTs
- Assess the benefits that these programs and practices have had on organizational performance.

### Use of Quality Programs

Tables 5.1 and 5.2 present the aggregated responses to the survey questions that were designed to identify the types of organizational improvement programs being used, the extent of their use, and their perceived impact on performance. Specifically, the following five questions were asked:

- What types of improvement programs, business models, and philosophies does your utilize?
- What impact have your programs had on your agency's performance and output?
- How many years has your agency had these programs in place?
- What is your agency's current level of implementation with these programs?
- How broadly are these programs implemented?
- What is the level of interest of your agency's top leadership in these programs?

Each of the first five of these questions included the program choices that are listed in the first column of Table 5.1 with the instruction to mark all choices that applied to their agency's use and experience with the programs. Thus, respondents gave multiple responses if their agency uses more than one program.

The results in Table 5.1 indicate that 15 of the 45 responding agencies said they have no organizational improvement program, while 30 agencies are using one or more programs. The overwhelming majority of agencies using these programs reported benefit from their use. The programs were said to have either "Some" or "Significant" impact in all but 2 of the 48 responses.

Table 5.1 also compares the results with similar questions asked in a survey conducted in January of 2003. The results are comparable for all but the Baldrige and Deming programs, for which much greater use was reported in 2003. While it is possible that there is currently less use of these programs, such a large change of use in such a short time of programs that were largely considered beneficial seems unusual. It should be taken into account that the 2003 survey was conducted via telephone interview while the 2005 survey was a document sent to each agency for completion, and that the response of "None" was not documented in 2003. Since the

difference of 17 between the number of responses to these programs in 2003 and in 2005 approximates the number of “None” responses in 2005, it is possible that many of the 2003 respondents were indicating a history, rather than current use, of Baldrige and Deming programs.

**Table 5.1: Quality Programs Reported  
(2005 N= 45 States; 2003 N= 47 States)**

Quality Programs	September 2005							January 2003						
	Number of Responses	Impact On Performance			Years In Place			Number of Responses	Impact On Performance			Years In Place		
		Significant	Some	None	0-2	3-6	7 +		Significant	Some	None	0-2	3-6	7 +
<b>NQI/NPHQ</b>	17	2	13		2	6	9	18	2	14	2		9	2
<b>Baldrige</b>	16	6	9		4	7	5	28	11	15	2	6	15	2
<b>Deming</b>	7	2	5			2	5	12	4	5		1	2	
<b>Six Sigma</b>								1		1	1	2		1
<b>ISO</b>	4	2	2		2	2	0	5		4		2		
<b>Lean</b>								<i>(not asked in 2003)</i>						
<b>OTHER</b>	8	3	2	2	3	4	1	11	8	5	1	3	7	1
<b>NONE</b>	15							<i>(not documented in 2003)</i>						

Table 5.2 presents the aggregate of responses to the questions regarding the extent of implementation of the quality programs in use. It shows that the large majority of programs are well established, i.e., beyond the initial stage, and are functioning agency-wide or in multiple units, rather than isolated in a single area.

**Table 5.2: Extent of Implementation of Quality Programs**

Quality Programs	Number of Responses	Level of Implementation				Breadth of Implementation		
		Initial Training	Expanding Use	Sustaining Use	De-emphasizing	Agencywide	Multiple Areas or Units	Local Area or Unit
<b>NQI/NPHQ</b>	17	1	6	9	1	4	11	3
<b>Baldrige</b>	16	3	4	5	3	7	8	1
<b>Deming</b>	7		1	5	1	5	1	1
<b>Six Sigma</b>								
<b>ISO</b>	4	1	2	1			4	
<b>Lean</b>								
<b>OTHER</b>	8	2	2	2		6	1	

Table 5.3 on the following page shows the specific programs in use by each DOT.

**Table 5.3: Programs in Use by Each DOT**

DOT	TYPE of PROGRAM											
	NQI/NPHQ	Baldrige	Deming	Six Sigma	ISO	Lean	Other				None	
							Balanced Scorecard	CPI/CQI *	CPM **	Performance Measures		MBO/TQM/ Baldrige***
Alabama												x
Alaska												x
Arizona	x	x	x		x							
Arkansas												x
California												x
Colorado											x	
Connecticut												x
Delaware												x
District of Columbia	x	x										
Florida		x	x		x							
Georgia	x	x										
Hawaii,												x
Idaho		x										
Illinois			x		x							
Indiana												
Iowa	x	x	x									
Kansas	x											
Kentucky												x
Louisiana												x
Maine												
Maryland	x	x										
Massachusetts	x											
Michigan	x		x									
Minnesota		x	x									
Missouri		x										
Montana	x						x					
Nebraska												x
Nevada												x
New Hampshire		x										
New Jersey	x	x										
New Mexico	x	x										
New York State												x
North Carolina								x				
North Dakota	x	x	x									
Ohio		x										
Oregon												x
Pennsylvania	x				x							
Rhode Island												x
South Carolina	x	x										
South Dakota	x								x			
Texas	x											
Utah												x
Vermont	x							x				
Virginia										x		
Wyoming		x					x					

**LEGEND**

\* **CPI/CQI:**  
- Continuous Process Improvement/

\*\* **CPM:**  
- Collaborative Performance Management

\*\*\* **MBO/TQM:**  
- Management by Objectives  
- Total Quality Management

As shown in Table 5.4, the interest of top leadership in the organizational improvement programs is generally, though not uniformly, high.

**Table 5.4: Leadership Interest in Organizational Improvement Programs**

		CHANGE IN INTEREST		
		Increasing	No Change In Last 4 Years	Decreasing
LEVEL OF INTEREST	High	11	2	0
	Moderate	0	3	1
	Low	0	1	3

### **Use of Various Organizational Improvement Practices and Their Impact on Performance**

The tables in this section have been designed as “quick reference” guides for anyone seeking to benchmark particular types of organizational improvement practices and tools. In addition to listing which DOTs are using which tools and practices, they serve to direct those in search of best practices to the states that perceive their efforts to be contributing to their organizational effectiveness.

Presented at the top of Table 5.5 are specific organizational improvement practices and tools that survey respondents were asked to identify the extent to which each is utilized and to assess the contribution to organizational performance that each has. The table shows the impact rating given for every practice or tool that the DOT was using “routinely.” Empty cells indicate that the DOT uses the tool or practice only occasionally, or not at all.

Parts of the survey also asked respondents to briefly describe programs, practices or tools that they considered to be “Strengths that other DOTs would find of interest.” A bolded rating in Table 5.5 indicates that the DOT described a particular practice or tool that it considered a strength.

There were many practices described as strengths that did not fit into any of the categories at the top of Table 5.5. Table 5.6, therefore, lists these and indicates the DOTs identifying them as strengths.

The specific descriptions of strengths given by each DOT are listed within the composite of survey responses presented in Appendix A. Anyone interested in a particular practice or tool can, therefore, quickly identify the states that are reporting beneficial use and then refer to the relevant commentary of those states in Appendix A.

**Table 5.5: Ratings of the Impact on Performance of Organization Improvement Practices**

5 = Outstanding 4 = Significant 3 = Moderate 2 = Some 1 = Little or None NR = No Rating	ORGANIZATIONAL IMPROVEMENT PRACTICES & TOOLS													
	Mission, Vision, Value Statements	Strategic Planning	Customer Satisfaction Surveys	Employee Satisfaction Surveys	Employee Recognition Programs	Process Streamlining	Benchmarking Studies	Customer & Operations Data Repository	PROCESS TO:			MEASURES TO:		
									Ensure Supplier Quality	Review Organization Performance	Conduct Market Research	Monitor Organization Performance	Budget/Allocate Resources	Support Project/Program Decision
Alabama	4	4			4		2		3	4			3	3
Alaska	4	2	4		4			2	4	3	4		3	3
Arizona	2	4	3	3	3	4		4	4	3		4		4
Arkansas									4					
California	3		4		4	4			4	4			3	4
Colorado	3	3	3		2			4	1				2	3
Connecticut	3	3			3				3	3			3	2
Delaware	2				3					3	2			
District of Columbia	5	5	5	5	5	5	5	5	5	5	5		5	5
Florida	4	3	4	4	3			4	4	4			4	3
Georgia	NR	NR	NR	NR	NR	NR	NR		NR		NR		NR	NR
Hawaii					3				1	2				
Idaho	3	3				3			4	2			3	3
Illinois	4	3	4	3	5	3	3	2	4	4			4	3
Indiana	4								4					
Iowa	NR	NR	NR	NR	NR				NR	NR	NR		NR	NR
Kansas	4		5		3	4	4	4	4	5			4	4
Kentucky	3				2				1	3				4
Louisiana		3			3	4		3	4	2				
Maine	3	4	4		3	4			4	4				
Maryland	4	4	3	5	3	5	4	3	4	4	NR		4	4
Massachusetts	2	3			1	3		4	4				4	
Michigan	4	4	3	3	3	4	3	3	4	4	3		3	4
Minnesota	4	5	4				3	4		5	2		4	4
Missouri	5	4	5	5	5	5	5		5	5	5		5	
Montana	3	2	3		2			2	3	3			2	3
Nebraska	4	4	4	3	3			4	4	4			3	4
Nevada	2	3			NR	2	3		3	2			2	3
New Hampshire	2	2			2	3		4	4	3				4
New Jersey	4				5	4		4	5	3			3	4
New Mexico	4	NR		4	4				4				4	
New York State	4	4			1	4			4	2				4
North Carolina	4		4		3	5			4	4	4			5
North Dakota	4	4	4	4	4				4	4	4			
Ohio	4	4	4	2	2	4	5	5	5	5	2		5	5
Oregon	4	3			5				4				4	5
Pennsylvania	2	3	3					2	3	3			3	3
Rhode Island									4				3	
South Carolina	4	4	5	4	4	2	3	3	4	4	3		4	4
South Dakota	2	3	4	4	3	5			3	3				4
Texas		3	4	4	4	4	4	3	4	4	4		4	4
Utah					3				4	3			3	
Vermont	3	3			4				4	3			4	4
Virginia	4	5	4	4	2	4	4	5	4	4	4		5	3
Wyoming		1	3					2	4	1				2
<b>Average Impact</b>	3.4	3.4	3.9	3.8	3.2	3.9	3.7	3.5	3.7	3.4	3.2		3.7	3.7
<b># of States Using</b>	38	34	26	18	38	22	14	22	43	37	14		26	28

**Table 5.6: Other Organization Improvement Practices Identified As Strengths**

	Context Sensitive Solutions	Partnering	Leadership/Mgmt Development	Mentoring	Succession Planning	Recruiting	Learning Management System	Other Training and Development	Other HR Programs	Career Development	Employee Wellness	Information System	Project Management
Alabama													
Alaska													
Arizona		x											
Arkansas													
California			x										
Colorado												x	
Connecticut	x												
Delaware						x							
District of Columbia													x
Florida								x					
Georgia													
Hawaii													
Idaho								x					
Illinois	x												
Indiana													
Iowa													
Kansas		x											
Kentucky													
Louisiana													
Maine			x										
Maryland	x												
Massachusetts													
<i>Michigan</i>													
Minnesota													
Missouri								x		x			
Montana													
Nebraska													
Nevada													
New Hampshire			x					x					
New Jersey				x	x				x	x			
New Mexico						x			x				
New York State													
North Carolina													
North Dakota			x	x	x	x					x		
Ohio								x		x		x	
Oregon	x												
Pennsylvania													
Rhode Island													
South Carolina			x										
South Dakota													
Texas							x		x				
Utah													
Vermont			x										
Virginia							x					x	
Wyoming								x					

Table 5.7 presents, for each type of organizational improvement, the differences in performance impact ratings between the ten DOTs selected for site visits and the DOTs not selected. For five of the categories of improvement programs and practices the selected DOTs ratings were significantly higher ( $p < .05$ ). These included:

- Mission, Vision, Value Statements
- Strategic Planning
- Process to Ensure Supplier Quality
- Process to Review Organization Performance
- Measures to Monitor Organization Performance

Two of the categories, Customer Satisfaction and Employee Satisfaction Surveys, showed negligible differences. For the remaining seven, the selected DOTs gave moderately, but not significantly, higher performance impact ratings.

**Table 5.7: Comparison of Impact Ratings of DOTs Selected for Site Visits with Other DOTs**

		# of States Using	AVERAGE IMPACT RATINGS			DIFFERENCE	t-TEST Probability
			All Responding DOTs	10 Selected DOTs	DOTs Not Selected		
5 = Outstanding 4 = Significant 3 = Moderate 2 = Some 1 = Little or None							
Mission, Vision, Value Statements		38	3.44	3.90	3.27	0.63	<b>0.026</b>
Strategic Planning		34	3.39	3.88	3.22	0.66	<b>0.041</b>
Customer Satisfaction Surveys		26	3.88	3.88	3.88	0.00	0.500
Employee Satisfaction Surveys		18	3.80	3.78	3.83	-0.06	0.454
Employee Recognition Programs		38	3.23	3.60	3.08	0.52	0.103
Process Streamlining		22	3.86	4.14	3.73	0.41	0.163
Benchmarking Studies		14	3.69	4.20	3.38	0.83	0.066
Customer & Operations Data Repository		22	3.45	3.86	3.27	0.59	0.105
PROCESS TO:	Ensure Supplier Quality	43	3.73	4.30	3.55	0.75	<b>0.012</b>
	Review Organization Performance	37	3.44	4.00	3.26	0.74	<b>0.026</b>
	Conduct Market Research	14	3.50	3.75	3.38	0.38	0.299
MEASURES TO:	Monitor Organization Performance	26	3.67	4.20	3.29	0.91	<b>0.004</b>
	Budget/Allocate Resources	24	3.45	4.00	3.29	0.71	0.054
	Support Project Selection/Program Decisions	28	3.71	3.80	3.70	0.10	0.400

These results are consistent with the common themes observed in the site visits. For example, the Themes of *Desire to Look in the Mirror* and *Measures of Success* correspond to the selected DOTS reporting significantly greater performance impact from their practices related to reviewing and monitoring organization performance.

**A. Survey and Compiled Results**

**Survey of**

**ORGANIZATIONAL**

**IMPROVEMENT**

**PROGRAMS**

**AND**

**PRACTICES**

**IN STATE DOTs**



*AASHTO Standing Committee on Quality*



# Survey of Organizational Improvement Programs and Practices in State DOTs

## 1) How much and how well does your agency use each of the following PRACTICES and TOOLS?

(Note: The table below presents the percentage distribution of the 45 survey respondents)

	For each of the items below, click on ONE of the boxes in the left columns and ONE in the right columns.  <i>To change a marked box, click on it again, then click on your desired response.</i>						Contribution to Organizational Performance					
	ROUTINELY throughout the Department	ROUTINELY at departmental level and by many units	ROUTINELY at departmental level; NOT MUCH at the unit level	ROUTINELY by many units; NOT MUCH at Department level	OCCASIONALLY at the Department or unit level	<i>Seldom or never used</i>		OUTSTANDING	SIGNIFICANT	MODERATE	SOME	LITTLE OR NONE
<b>PRACTICES &amp; TOOLS</b>												
44	24	16	0	13	2	Mission, vision, and/or value statements	5	44	23	23	5	0
29	47	9	11	4	0	Processes to ensure suppliers provide quality products and services	9	65	19	7	0	0
16	27	30	5	23	0	Strategic planning <i>processes and documents</i> to guide your organization's strategy	7	27	39	20	7	0
16	25	5	14	34	7	Organizational performance measures to monitor performance, such as Dashboards/Scorecards	10	29	21	21	14	5
11	20	16	7	23	23	Performance measures in setting annual budget/resource allocations	7	21	26	14	17	14
17	31	12	7	24	10	Performance measures to support project selection and programming decisions	12	33	26	17	5	7
28	30	12	16	12	2	Processes for senior leaders to review organizational performance and make improvements	14	31	29	17	10	0
21	26	9	5	28	12	Customer satisfaction surveys	12	32	27	10	15	5
5	13	13	5	25	40	Process for market research ( <i>other than customer satisfaction</i> )	5	13	13	18	28	25
10	17	7	19	19	29	Repository of customer data and operational data accessible to all users in the organization	13	25	13	25	13	13
27	7	2	5	20	39	Internal employee satisfaction survey (employee morale survey)	7	26	14	5	24	24
34	34	9	9	9	5	Employee recognition programs	12	24	33	19	10	2
7	12	7	7	44	23	Benchmarking studies for organizational performance improvement	7	12	26	29	12	14
14	21	7	9	40	9	Process streamlining to improve cycle times and performance	14	26	29	17	7	7

## Leadership

How senior leaders\* guide and sustain your organization; how they represent it to stakeholders; how they communicate with employees and encourage high performance.

\* Heads of key functions or divisions, and above

		% Distribution			
		Strongly Agree	Agree	Disagree	Strongly Disagree
<p><b>Mark the answer that best matches your opinion regarding each statement.</b>  <b>Leave an item blank if you have no opinion or don't know.</b>  <b>To change a marked box, click on it again, then click on your desired response.</b></p>					
2	Our mission and vision statements are more than platitudes. They greatly influence our direction, decisions and plans.	16	69	16	0
3	Our employees have regular opportunities for two-way communications with senior leadership.	24	60	16	0
4	Our senior leaders are active in recognizing and rewarding employees for high performance.	16	49	35	0
5	We have effective ways of demonstrating and communicating the value of our work to the public and other stakeholders.	16	50	34	0
6	We have effective ways of anticipating public concerns.	9	70	18	2
7	I believe some of our <i>Leadership</i> processes and practices are <i>Strengths</i> that some other DOTs would find of interest.	31	36	33	0
8	If you answered "Agree" or "Strongly Agree" to the previous item please give a brief description of the Strengths.				

RESPONSES TO ITEM 8: <i>Leadership Strengths</i>	
<b>Arizona</b>	ADOT is becoming increasingly sophisticated in forging relationships with stakeholders in the transportation industry. The result has been a reduction in adversarial issues, a process for resolving the fewer issues that do arise and ultimately faster delivery of our services.
<b>Connecticut</b>	Open forum sessions yearly, regular staff meetings and quarterly meetings in the Districts. Employee Recognition program. Office of Communications, Context Sensitive Solutions (CSS) initiatives and Public Information hearings.
<b>District of Columbia</b>	Geographically based teams have been established consisting of design, construction and supported by traffic services; planning; materials and maintenance operations. - Stakeholders are integral part of project scoping through construction and completion - Senior engineering staff guide new employees through training; annual review and performance based incentives
<b>Florida</b>	FDOT has been working in some form of quality improvement since 1985 when we established a Deming based system modeled after Florida Power and Light (Qualtec). In 1998, we established our DOT Business Model based on Baldrige/Sterling. -- I believe our work in performance measures, the Florida Transportation Plan (FTP), the creation of our DOT Business Plan (a cascaded deployment of strategic planning), our annual employee survey, and our annual customer survey would all be of interest and value to other DOTs. -- Our Business Model Internet site provides some information on these and other processes we use in our system. – <a href="http://www.dot.state.fl.us/businessmodel">http://www.dot.state.fl.us/businessmodel</a> -- Our Florida Transportation Plan (FTP) Internet site provides access to the current 2020 plan -- <a href="http://www.dot.state.fl.us/planning/2020ftp/FTPfinal.pdf">http://www.dot.state.fl.us/planning/2020ftp/FTPfinal.pdf</a> -- and information about the current update process to move to the 2025 plan -- <a href="http://www.ftp2025.com">http://www.ftp2025.com</a>
<b>Georgia</b>	The Georgia DOT uses the results of an annual employee survey and focus groups to discuss the results as a catalyst for positive change in the organization.
<b>Idaho</b>	Director refers to the mission and vision in nearly every presentation regardless of group. -- Leadership has open-door policy and is willing to talk about any subject with anyone. -- ITD has a pretty good public involvement system and process. We are good at anticipating public concerns and addressing them.

<b>RESPONSES TO ITEM 8: Leadership Strengths</b>	
<b>Illinois</b>	By employing ISO 9001:2000 standards top-level managers are required to lead the way toward implementation and achievement of our strategies goals and objectives. We must provide evidence to demonstrate that leadership is engaged and effective, that processes are undergoing continuing scrutiny to design and develop improvements and that we communicate our goals and objectives to stakeholders inside and outside IDOT. Above all these requirements lead to a higher level of public accountability that isn't necessarily required by law, but is the right thing to do.
<b>Indiana</b>	NOTE 1 - INDOT is in the final stages of a major Reengineering of the Dept and has not addressed this issue at this time. NOTE 2 - INDOT will be setting definite performance measures (of Operational Performance Indices (OPIs) in the near future.
<b>Kansas</b>	Employee Recognition Program: -- The Kansas Department of Transportation's (KDOT) Employee Recognition Program, called the 'Example of Excellence', honors groups of KDOT employees for their outstanding efforts. Oftentimes KDOT employees go above and beyond the call of duty whether it's an emergency situation; a special project; a new program, or giving the extra effort to complete a project. This program gives supervisors across the state a way to acknowledge those employees for a job well done. The award is given quarterly at a ceremony with the Secretary of Transportation presenting certificates to each person and a plaque to the group. -- A Leadership Process that may be of interest to other DOTs: -- The KDOT Partnership Project -- Secretary of Transportation Deb Miller initiated the Partnership Project in 2003 as a top to bottom review of KDOT. The goal was to find a way for the Department to be more responsive to internal and external customers and to become a more efficient agency. -- The P2 project used a comprehensive; open; and transparent process to gather information (including more than 25 one-on-one interviews; statewide focus groups; and surveys of more than 900 stakeholders and citizens) and to synthesize findings into recommendations. Over time agency employees have embraced the top three priorities outlined below and more than 15 sub-teams were formed to develop specific; actionable recommendations: 1. Make KDOT a more desirable place to work 2. Nurture better relationships with local governments 3. Create KDOT's roadmap for continued success
<b>Maine</b>	The State Of Maine sponsors the Leadership Institute which has training modules for managers. Most people have found it extremely helpful especially in terms of learning to supervise a large number of people. MDOT also sponsors several internal training modules on subjects such as matrix organizations and organizational structures. These have helped employees to see their roles as a team member as well as better understanding the relationship of supervision versus project management.
<b>Maryland</b>	We use Contest Sensitive Solutions. All of our AASHTO submissions for SCoQ won awards this year, including the President's award. We use focus groups, surveys, phone surveys to determine our customers' needs. We partner with our customers/stakeholders on projects.
<b>Minnesota</b>	The Governor's office uses a 'score card' process for Agencies to report performance results to the public and to the Governor. It is updated quarterly. Senior Management has an annual calendar of meetings where performance results are reported. The reporting is done in special half day meetings devoted to topics like System Preservation, Program Delivery, Maintenance and Operations. Functional groups present the measures and discussion takes place about actions and schedules to improve or maintain performance.
<b>Missouri</b>	<a href="http://www.modot.mo.gov/about/general_info/strategicplan.htm">http://www.modot.mo.gov/about/general_info/strategicplan.htm</a>
<b>New Hampshire</b>	Tri-State Leadership conference - intensive week long leadership training offered to future leaders of DOT's from Maine, Vermont and New Hampshire.
<b>New Mexico</b>	See <a href="http://www.nmshtd.state.nm.us">www.nmshtd.state.nm.us</a> - From the Secretary-Guiding Principles. Our Dept leaders meet with employees throughout the Dept at: 1) New employee orientation; 2) District meetings; 3) Monthly meetings; 4) Website; 5) Newsletters; 6) Annual employee Organizational Climate Survey; 7) Employee Recognition Program - monthly; 8) Best Practices--(See 'Whatever It Takes' on Website). Also, see 'Good to Great' 1st & 2nd Qtr 2005.
<b>New York</b>	NYS DOT has been undergoing and is continuing to transform the organization. We are placing great emphasis on the need to operate the transportation system. Engineering resources are being consolidated into a few locations, so that our regional offices (other DOTs call them district offices) can focus on operating the transportation system in their jurisdiction. -- Part of this transformation process, which is still underway, is strengthening the role of the customer and measuring performance.
<b>North Carolina</b>	1. All units have mission and vision statements that are used daily to drive unit operations. 2.

**RESPONSES TO ITEM 8: Leadership Strengths**

	Employees are encouraged during periodic staff meetings to voice their views and participate in satisfaction or other specialized employee surveys. 3. Although not perfect, we do anticipate public needs in a variety of public meetings and other public forums.
<b>North Dakota</b>	Strong Leader Development efforts: -- Career Paths for leader/managers as well as technical or functional experts. -- Supervisor driven Individual Development programs. -- Formal Leadership Training Initiatives: The 21 Irrefutable Laws of Leadership Training -- The 21 Qualities of a Leader Training -- The Question Behind the Question! - Personal Accountability Training -- Mentorship program -- Organizationally focused Succession Planning program.
<b>Ohio</b>	We have a thorough strategic planning process, combined with clear performance measures that have significantly improved the Department. Performance measures were set for 64 major performance areas. Each District and Division was given objectives to meet the performance measures and goals. As a result, ODOT has reduced bridge, pavement and maintenance deficiencies by more than two-thirds while shrinking the Department staff by 25 percent. Major, catalytic process reforms regarding project selection, operating efficiency, vendor quality, system conditions and public outreach have been installed. Performance measures, customer requirements, quality processes and continuous improvement are ingrained into major processes. Two districts have been designated Baldrige Tier IV organizations, the Department as a whole was rated a Tier II in the Baldrige process and Governing Magazine rated ODOT's infrastructure management as an -A. The Ohio General Assembly two years ago enacted a six-cent fuel tax increase in response to ODOT's request for it to fund a strategic, 10-year transportation investment program. The General Assembly has been complimentary and rewarding to ODOT because of its efficiencies, strategic planning process and its accomplishments. -- ODOT has tried to emulate the 'Good to Great' process of emulating best in class organizations, honing performance measures, listening to customers and continually reviewing progress to improve the Ohio transportation system.
<b>Oregon</b>	Oregon DOT has moved beyond the standard Vision, mission, values process and is implementing a new approach to project delivery: Context Sensitive and Sustainable Solutions (CS3). CS3 incorporates sustainability into the CSS/CSD framework. It requires effective public engagement and participation in the development of the project context and implementation.
<b>South Carolina</b>	Development and implementation of leader development programs.
<b>South Dakota</b>	1. While we could improve upon both statements, we do use these when formulating our strategic plan. 2. Senior leadership has annual employee meetings, and in addition attends various functions in the regions such as the Rodeo's and Celebrate Success. 3. We have a program called Team Awards" that we do each year and the awards are handed out at the employee meetings. 4. Our external communications plan provides direction for employees to be able to get the word out about the DOT. In addition our communications manager takes every opportunity to put out press releases. In addition we have annual STIP meetings where we travel to various communities and discuss the future road projects in their areas and answer questions. We meet regularly with our stakeholders such as the Associated General Contractors. 5. We do a survey every other year which provides us with great information on the public's opinions."
<b>Texas</b>	1. Administration and leadership of the department continuously practice incorporating the mission and vision statements into practical applications and communications throughout the department. 2. The department has an Employee Advisory Committee (EAC) that is staffed by rank and file employees from across the state. They receive suggestions, complaints, ideas and forward to the appropriate business unit for response. These responses are communicated to all employees throughout the department. Administration sends regular communications to all department employees via e-mail and memorandum on events and directions of the department. The department's administration encourages and promotes active two way communications. 3. Administration and senior leadership are committed to providing recognition not only in a fiscal manner but in other recognition methods department wide. Annual safety awards meetings, department sponsored awards for high performance, employee incentive programs are all in place and supported by the administration. 4. Effective communication with the public includes a comprehensive and interactive website: <a href="http://www.dot.state.tx.us">www.dot.state.tx.us</a> and then related links within the website. Public meeting and hearings are conducted across the state and are advertised in advance. Each district has a dedicated Public Information Officer responsible for public communications.
<b>Vermont</b>	During the past several years, and particularly during the last fiscal year, the Agency has fostered a leadership and management culture which encourages broad ranging communication within the

**RESPONSES TO ITEM 8: *Leadership Strengths***

	<p>executive staff, down through and up from within the organization. The Secretary and senior staff held meetings with employee teams and sections (approximately 60% of staff) to discuss methods to improve business practices and internal processes. The focus has been on eliminating redundant or unnecessary steps in contracting, engineering and design, vehicle registration, and maintenance. Suggestions have been implemented to reduce costs, enhance fiscal oversight, and improve the timeliness and delivery of engineering and administrative work. VTrans asked the Technology Extension Division of the Vermont Technical College to provide an Education and Training Needs Assessment of the agency's technical and supervisory training programs. We are integrating this assessment along with other tools to develop a broad-based leadership and technical education and development curriculum for staff. Following a number of staff retreats and focus sessions, the Secretary in June issued a statement of Agency Priorities &amp; Strategic Direction (attached). The four priorities are to (1) embrace asset management and project prioritization in our decision-making, (2) develop reliable project schedules and costs, (3) focus on communication and collaboration, and (4) promote a culture of responsibility. Collectively, the result of these initiatives has been to redirect senior staff, management, and agency employees to practices and processes which are more customer focused and accountable, and are better aligned with state-wide objectives for economic development and transportation linkage.</p>
<p><b>Virginia</b></p>	<p>VDOT's mission, values, and corporate tenants are clearly stated. [See the attachment entitled 'VDOT's Mission, vision and Values,' which has been excerpted from VDOT's strategic plan dated July 2005.] Moreover, they are widely publicized within the organization. In the hallways there are signs with the mission statement and values. On the opening page of the internet portal for VDOT employees is a link to view the eight corporate tenants, along with the following lead-in: 'Eight corporate tenants, which define sustainable management principles and business practices that establish clear lines of responsibility and accountability, were recently enacted. All agency policies, procedures, and guidelines will emanate from the corporate tenants.'</p>

**Strategic Planning** How your organization develops strategic objectives and action plans; how you deploy them and measure progress.

		% Distribution			
<i>Mark the answer that best matches your opinion regarding each statement. Leave an item blank if you have no opinion or don't know. To change a marked box, click on it again, then click on your desired response.</i>		Strongly Agree	Agree	Disagree	Strongly Disagree
9	The results of our strategic planning process have enabled us to be proactive. They greatly influence our direction, priorities, resource allocation and organization goals.	26	44	30	0
10	Our strategic plans are based on factual information about our strengths, weaknesses, opportunities, threats and major trends in technology, demographics, and stakeholder expectations.	16	60	23	0
11	We have effective practices and processes for translating strategic plans and organizational goals into operating plans for all levels and functions.	7	43	50	0
12	We have good ways of measuring our progress against our strategic goals.	14	40	44	2
13	Our planning process includes comparing our performance, programs and priorities with those of other DOTs and other relevant organizations.	7	22	59	12
14	I believe some of our <i>Strategic Planning</i> processes and practices are <i>Strengths</i> that some other DOTs would find of interest.	13	35	53	0
15	<i>If you answered "Agree" or "Strongly Agree" to the previous item, please give a brief description of the Strengths.</i>				

RESPONSES TO ITEM 15: <i>Strategic Planning Strengths</i>	
<b>Arizona</b>	Every 3 to 4 years ADOT reviews its strategic plan. Executive leadership spends several days engaged in a SWOT analysis. The SWOT analysis tests our mission, vision, values, strategic issues, critical issues and goals. The product is rolled out to staff in draft form to test its validity. Input from the Orgs (work units) are incorporated into the draft which is finalized. The final product is rolled out to the division and Orgs to align their operating plans to the revised strategic plan. While all groups engaging in strategic planning do have issues that arise that they must react to, we believe that the strategic plan has helped ADOT remain focused.
<b>California</b>	The Department has recently started implementing performance-based management.
<b>Florida</b>	Our cascaded or tiered Business Plan process is completing its first phase. I believe this process will prove to be very effective in moving the response for items 10 - 12 from agree to strongly agree in the next 12 - 18 months. I further believe that other DOTs would be interested in our Business Plan process. We have shared this plan with some other DOTs. -- <a href="http://www.dot.state.fl.us/businessmodel/businessplan.htm">http://www.dot.state.fl.us/businessmodel/businessplan.htm</a> -- In addition the development process for the Florida Transportation Plan (20 year plan updated every 5 years with extensive public input) might be of interest to some DOTs. -- <a href="http://www.ftp2025.com">http://www.ftp2025.com</a>
<b>Illinois</b>	Our strategic planning processes have been instrumental in gaining buy-in and understanding from middle and upper level managers on the general goals we seek to achieve in the short and long terms. Strategic planning sessions always seek input from middle managers and line staff in addition to guidelines from upper management. The result tends to be strategies that encompass street-level concerns and issues with action plans that address these issues. With middle and upper management well-engaged staff is directed toward more consistent and durable approaches to implementation of the strategies.
<b>Kansas</b>	Expanding the use of performance measures has recently been made a priority in our agency. We are working to adopt standards that will assure us internally that we are focusing our resources in the right direction -- externally it's about reporting our performance in a clear and easy to understand way for our stakeholders and the state legislature. As resources become more limited demonstrating accountability becomes more important than ever. Developing these measures in a collaborative way across many levels in the organization with the direct involvement of the CEO helps ensure these measures will be used to manage and results will be reported.

**RESPONSES TO ITEM 15: *Strategic Planning Strengths***

<b>Maryland</b>	Although we are in an infancy stage with strategic planning, we are making great strides. We are developing performance-based budgets, employee evaluations, using both outcome and efficiency measures and tying all of our quality initiatives together such as self-assessments, Managing For Results, Workforce Planning, Strategic Planning, to name a few. This gives us ammunition for our Legislative Session.
<b>Michigan</b>	The department has developed a strategic plan for its road and bridge program, which has been the basis for a Five Year Improvement plan. The department is now developing a new strategic plan to make it more multi-modal in terms of addressing transportation issues.
<b>New Hampshire</b>	NHDOT is actively in the process of leading the development of a Long Range Transportation Business Plan for New Hampshire. The plan is a State transportation plan and not just a DOT strategic plan. The purpose of the plan is to create a universal vision for transportation in NH in the year 2030 with associated goals, objectives and alternative future scenarios for investment.
<b>New Mexico</b>	Our strategic plan, which is reviewed quarterly, tracks performance measures as defined by the Executive, Legislature and Government Accountability Act. While we do not meet some of these measures, they have enabled us to focus on those performance targets important to the DOT.
<b>New York State</b>	Dozens of teams, each with consultant support, were formed to evaluate key processes of the Department and to recommend fundamental changes, based on our new transformed philosophy. We established opportunities for people not on a team to contribute as well. We did many things right in this approach and we have a few lessons learned that we could share, too.
<b>North Carolina</b>	1. Our planning allows us to be proactive in delivering services. 2. Many of our plans are based on benchmark data where possible.
<b>North Dakota</b>	Strategic Planning process based on "Soaring With The Phoenix" written by James A Belasco and Jerre Stead: -- Vision Statement: Safe Ways Great Ways Promoting Economic Growth -- Mission Statement: 'Providing a transportation system that safely moves people and goods.' -- Values: Professionalism. Respect. Integrity. Dedication. Excellence. Organizational Goals: Enhance Customer Satisfaction. Increase safety on North Dakota's transportation system and within the Department of Transportation. Increase the quality and efficiency North Dakota's transportation system and services. Enhance employee effectiveness and well-being. Strengthen Stakeholder relationships. Each goal's strategies are implemented through objective action plans that are developed by cross-functional work teams. Action plans implement organizational systems and processes to carry out each objective. Progress is tracked and results communicated across the organization using our communications infrastructure. -- Executive Support is a key element of strategic plan implementation and success. -- The entire process must be characterized as "Dynamic" or "Living" in order to adjust to changes in the department's operational environment and accomplish organizational goals and objectives. -- Our strategic planning and performance measurement processes are a forerunner for North Dakota state government accountability efforts."
<b>Ohio</b>	ODOT has a strategic planning process that is extremely meaningful. We have two-year goals, which are the first increment of six-year capital plans which are components of 15-year strategies. The plans and goals have clear, specific, numeric milestones and performance measures which cascade down to all districts and even counties. Each two years the initiatives are updated and refined to create new goals based upon customer requirements, system performance or other strategic input. -- As a result, ODOT has reduced its maintenance deficiencies to low and predictable levels. ODOT is on track with a specific program of congestion projects to significantly reduce the rate of growth in congestion. ODOT has clear goals for accident reductions to achieve the national goal of reducing fatalities to 1.0 per 100 million vehicle miles of travel. -- In other words, the strategic planning process drives daily performance because it is included in annual evaluations, quarterly performance measures, annual performance measures and biennial initiatives.

**RESPONSES TO ITEM 15: *Strategic Planning Strengths***

<b><i>South Dakota</i></b>	1. We are on the cusp of implementing activity based costing, and performance measures. These pieces were missing in the past with regard to formulating and tracking our progress with the strategic plan. Our strategic planning process has been good the past couple years, and we have indeed been proactive in some areas such as customer service. The plan has influenced our direction, but we aren't yet to getting that to resource allocation and organizational goals. 2. I have networked with many DOT's and CEO's and I am aware of some that have little if any experience in realistic performance based strategic plans. Others are in a similar process as SD DOT and may benefit from an exchange of ideas, thoughts, progress, and missteps that we have experienced in this process.
<b><i>Virginia</i></b>	VDOT's strategic planning process is multi-dimensional. Strategic planning is performed at the major directorate and district/divisional levels. Top leadership establishes the organization's vision, mission, values, and organizational goals initially. Once this has been completed, work teams are formed to develop objectives, measures, and strategies supporting the goals at both the organizational level as well service area level. VDOT also has a comprehensive performance management program that develops organizational performance measures linked to the strategic plan mentioned above. A number of key performance indicators are tracked monthly, quarterly, and annually. Performance is tracked and reported utilizing a combination of internal and external reporting mechanisms such as the Public Dashboard System, Commonwealth Transportation Board Report Cards, and Monthly Videoconferences held with top leadership.

## Customer & Market Focus

How your organization determines the needs, requirements, expectations, and preferences of your customers and markets.

		% Distribution			
		Strongly Agree	Agree	Disagree	Strongly Disagree
<p><b>Mark the answer that best matches your opinion regarding each statement.</b>  <b>Leave an item blank if you have no opinion or don't know.</b>  <b>To change a marked box, click on it again, then click on your desired response.</b></p>					
16	We have organized our customers and stakeholders into well-defined market segments, and structured our programs and services in response to their requirements, expectations and preferences.	7	42	49	2
17	We have a good program for periodically collecting and analyzing customer satisfaction data.	17	43	38	2
18	We have good methods for projecting the needs for our programs and services based on market, demographic and economic information.	10	36	50	5
19	We have made it easy for customers to contact us and we make sure that their questions and concerns reach the appropriate organizational units..	30	64	7	0
20	The customer and market information we collect greatly influences our organizational priorities and plans.	10	60	31	0
21	I believe some of our <i>Customer and Market Focus</i> processes and practices are <i>Strengths</i> that some other DOTs would find of interest.	10	35	53	3
22	<i>If you answered "Agree" or "Strongly Agree" to the previous item, please give a brief description of the Strengths.</i>				

### RESPONSES TO ITEM 22: Customer & Market Focus Strengths

<b>California</b>	We have conducted external and internal surveys in the past, but have now initiated a program whereby these will be conducted on a routine basis. Both surveys will be conducted every other year - on an alternating basis (internal survey one year, external survey the next). Additionally, we will be soliciting feedback on our internet site. The site will be advertised through PSAs. Individual units within the Department have also conducted customer satisfaction surveys.
<b>District of Columbia</b>	we communicate to our customers through Advisory Neighborhood Commission (ANC) representatives. - department prioritize transportation projects determined by asset evaluation
<b>Florida</b>	Since 1999/2000 FDOT has done significant work in segmenting and surveying our 6 key customer groups. I believe other DOTs would be interested in our work in this area. We have shared this information with other DOTs.
<b>Georgia</b>	The customer survey provides insight into the areas our customers value and consider important.
<b>Illinois</b>	IDOT has undertaken annual written surveys of Illinois motorists each year since 2000 and the information gathered has been very helpful in setting strategic priorities for the Division of Highways, both in construction and day-to-day operations and maintenance. With the stronger emphasis on strategic management our staff has understood the importance of a new emphasis on customer recognition and satisfaction. Our commitment to the ISO 9001:2000 standards has put the need for customer feedback and methods of resolving and documenting customer complaints at the forefront of our process analyses and performance measures structures. Thus IDOT programs now more than ever are driven by customer needs and expectations. Further our implementation of a detailed Context Sensitive Solutions policy gives customers and community groups representing area customers a more effective voice in helping IDOT shape its design and construction plans to best serve individual communities.
<b>Indiana</b>	NOTE 1 - INDOT is in the final stages of a major Reengineering of the Dept and has not addressed this issue at this time. NOTE 2 - INDOT will be setting definite performance measures (of Operational Performance Indices (OPIs) in the near future.

**RESPONSES TO ITEM 22: *Customer & Market Focus Strengths***

<b>Kansas</b>	KDOT has used statistically valid surveys to measure customer satisfaction since 1998. Through our Partnership Project, we continue to place great emphasis on customer satisfaction and market focus. We used a statistically valid survey to the district level which allowed us to gather feedback from residents; city and county representatives, legislators, contractors, consultants, and vendors. During the fall of 2003, our agency conducted two surveys built on a random sample of 1,900 stakeholders statewide. The information obtained from the surveys, along with information from 15 focus groups, was analyzed and revealed that KDOT received high marks for the physical aspects of the state highway system.
<b>Maine</b>	The Department has entered into a Gateway One project that looks at a corridor along Rt. 1's many historic villages which experience major congestion during the summer months. We identified a specific corridor and went to each community with a plan to join together and look at upcoming projects, potential access management opportunities, view scape issues and mobility issues. We are still in the early process of this effort but the typical project in this corridor takes 10 to 15 years to get to construction, we are hopeful better customer focus will lead to time and money improvements.
<b>Maryland</b>	Again, we have clearly defined market segments. We use focus groups and town meetings to reach our customers. We are looking into the future of 10-20 years as to what DOTs will look like and projecting our customers' needs. In line with this, we are undertaking an organizational-wide workforce planning initiative to better serve our customers.
<b>Missouri</b>	<a href="http://www.modot.mo.gov">http://www.modot.mo.gov</a> ; <a href="http://www.mapourfuture.org">http://www.mapourfuture.org</a>
<b>Nebraska</b>	Public participation meetings, planning meetings, 24/7 Web Communications
<b>New Hampshire</b>	> Website business center w/ "Contact Us" link > Customer satisfaction survey conducted at county fairs
<b>New Jersey</b>	NJDOT has a website that allows our customers to comment on our services as well as ask questions or seek information. -- NJDOT Emergency Service Patrol units patrol several key highways in the state in order to assist drivers with vehicle problems or mitigate traffic due to accidents, etc. We routinely issue customer service questionnaires to solicit feedback from motorists. -- NJDOT has special telephone numbers established for customers to call to report potholes (1 800 POTHOLE) or to obtain information on specific large DOT projects.
<b>New Mexico</b>	See 'Investing In New Mexico - 2004 Survey of New Mexico Roads & Highways, GRIP 2004 attachment
<b>North Carolina</b>	1. Our market segments include such areas as urban/rural, fourteen divisions, three regions (coast, piedmont, mountain), population density, industry bases, proximity to public services, RPOs and MPOs, and others. 2. We have established methods for predicting program needs. 3. The department operates a full-time toll free number for customer needs, on-line updated information, local contact numbers to the county level, and other methods. 4. We use customer market information to guide both short-term and long-term planning.
<b>North Dakota</b>	Requirements, expectations, and preferences are gathered through: Community Input or Town Hall type meetings (i.e. for bridge project design considerations). Close Coordination with our Metropolitan Planning Organizations. A statewide 'Customer Satisfaction Survey.' Close coordination and cooperation with Native American Tribal Government entities.
<b>Ohio</b>	We do annual opinion polls on customer satisfaction. -- We have a formal, automated customer inquiry management system. -- We track web hits on traffic information and queries. -- We have regular outreach to local officials. -- Public input is sought for all projects. -- We have automated e-mail customer comment processes. -- We include comment phone line numbers at rest areas.
<b>Oregon</b>	We operate a very effective citizen inquiry process.
<b>Pennsylvania</b>	1. Safety programs for older drivers; 2. Online capability for generation Xers; 3. Customer Care Center in Highway Administration; 4. Call Centers in Safety Administration; 5. 1-800 Fix Roads toll free line; 6. IRI Threshold Study; 7. Market research data for decision making forecasting model
<b>South Dakota</b>	1. We do a customer survey every other year. 2. We provide much information on the internet, and also do public service announcements. 3. We use the results from the survey to formulate the strategic plan, performance measures and action items.
<b>Texas</b>	TxDOT performs a customer service survey to measure our effectiveness. Recently customers were asked to evaluate the internet website so that it is redesigned to be a more useful, efficient and effective resource to getting information or to do business with TxDOT.
<b>Virginia</b>	On July 1, 2005, VDOT launched a new version of its Dashboard, available to the public on the VDOT website. The Dashboard includes feedback buttons so that the public can send questions
<b>Wyoming</b>	The marketing plan for the Togwotee Trail to Yellowstone Project, including the use of

**RESPONSES TO ITEM 22: *Customer & Market Focus Strengths***

user/stakeholder committees and the town hall-style public involvement meetings.

**23 For what purposes do you use customer satisfaction and/or market research studies?**

(Mark all that apply)

**# of Responses**

38	Determine public opinion
18	Define products & services
40	Determine level of satisfaction with current level of services
28	Establish level of services
15	Test new products, services or service approaches
1	Don't know
5	Other, <i>please describe:</i>
<b>Arizona</b>	ADOT's Motor Vehicle Division conducts regular customer surveys. This is done by those people who renew title registrations or driver's licenses.
<b>Massachusetts</b>	We generally don't perform studies, but we use customer information obtained from written and verbal feedback to help shape our services.
<b>Nevada</b>	We do not do much along the lines of customer satisfaction surveys. Usually the squeaky wheel gets the grease. We do a lot of public hearings for specific projects that seem helpful.
<b>North Dakota</b>	511 information system; Online Motor Vehicle Registration
<b>Ohio</b>	We have used public opinion to help us determine the effectiveness of work zone maintenance of traffic practices, to determine satisfaction with basic roadway appurtances such as signing and pavement markings. We also use it to determine whether the public is satisfied with snow and ice efforts.
<b>South Dakota</b>	To find out what information they know, and what they don't know so that we can better inform them.

**24 What is the frequency and scope of the customer satisfaction and/or market research surveys you conduct? (Mark all boxes that apply)**

Research Scope	Number of Responses				
	None	As needed	Two or more times per year	Annually	2 to 5 years
A. Agency wide	6	10	0	7	18
B. Functional areas within agency	5	21	5	7	6
C. Specific products or services	5	22	4	4	3
D. Specific topics	6	23	3	3	5
E. Specific geographic areas	6	22	1	7	6
F. Other, <i>please describe:</i>	0	2	0	0	1
<b>Arizona</b>	ADOT's Motor Vehicle Division solicits customer feedback with every transaction.				
<b>Colorado</b>	The Customer Satisfaction Survey is conducted every three years and the data are statistically valid for four different Geographical areas; six Engineering Regions; fifteen Transportation Planning Regions and three Regional Interest Group areas. The surveys have been conducted to coincide with the statewide planning process. There are nine demographic questions asked for analysis purposes. There are 40 plus questions related to transportation on the survey.				

**Measurement,  
Analysis &  
Knowledge  
Management**

How your organization measures, analyzes, aligns, reviews, and improves its performance at all levels.

		<b>% Distribution of Effectiveness Ratings</b>				
		<b>Very</b>	<b>Moderately</b>	<b>Somewhat</b>	<b>Not Very</b>	<b>Don't Use or Don't Know</b>
<i>Mark the answer that best matches your opinion regarding each statement.</i>						
<b>How effective is your organization's use of performance measures in each of the following functional areas?</b>						
25	Program Delivery (i.e., Planning, Design, Construction)	33	33	26	5	5
26	Maintenance	37	26	23	7	7
27	Traffic Operations	23	35	28	5	9
28	Roadway system performance	35	30	21	5	9
29	Other modal performance	7	21	37	16	19
30	Grant and program management	12	19	31	17	21
31	Information Technology	17	21	24	14	24
32	Finance	16	23	33	14	14
33	Human Resources	9	28	33	16	14

		<b>% Distribution</b>			
		<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<i>Mark the answer that best matches your opinion regarding each statement. Leave an item blank if you have no opinion or don't know. To change a marked box, click on it again, then click on your desired response.</i>					
34	Our measures for tracking our operating performance are clearly linked to our strategic goals and measures.	14	55	31	0
35	Our performance measures are well integrated within our management structure and processes.	12	44	44	0
36	Our performance is not hampered by too many performance measures or measures that are more cumbersome than useful.	9	63	28	0
37	We do a good job of communicating the results of our performance measures within our organization	9	21	67	2
38	Our information systems are well designed for producing what we need to track and review performance.	10	31	60	0
39	Our processes for reviewing performance are effective in enabling continuous improvement.	8	48	45	0
40	Our recruitment, succession planning and knowledge management practices are effective in preparing us for the workforce changes we face.	5	35	55	5
41	I believe some of our <i>Measurement, Analysis and Knowledge Management</i> processes and practices are <i>Strengths</i> that some other DOTs would find of interest.	11	24	63	3
42	<i>If you answered "Agree" or "Strongly Agree" to the previous item, please give a brief description of the Strengths.</i>				

<b>RESPONSES TO ITEM 42: Measurement, Analysis &amp; Knowledge Management Strengths</b>	
<b>Arizona</b>	The Intermodal Transportation Division's program performance measures (sent under separate cover). Motor Vehicle Division's performance measures package, see website: <a href="http://spweb.dot.state.az.us/intranet/mvd/home/StrategicPlanning/default.asp">http://spweb.dot.state.az.us/intranet/mvd/home/StrategicPlanning/default.asp</a>

**RESPONSES TO ITEM 42: *Measurement, Analysis & Knowledge Management Strengths***

<b>California</b>	As part of our overall effort to improve our performance and transform the Department into a mobility company, we are implementing performance-based management within the Department. We have revisited our strategic goals and objectives and identified corresponding performance measures to evaluate if we are accomplishing these goals and objectives. At the same time, we have identified an important set of system performance measures which drives the Department's goals and objectives. We hope to accomplish Items 35 through 40 above. We are not yet there, but are working in each of these areas - from a Department-wide standpoint. Units within the Department have very good performance measures to assess program performance.
<b>District of Columbia</b>	DDOT has initiated a 'status of everything' conference bi-annually for each unit to discuss transportation planning; policies; design; construction; traffic services; QAQC program; asset management and maintenance programs.
<b>Florida</b>	I believe our use of performance management software; our focus on performance measurement in our Business Plans, and our success story over the last 5 years (production more than doubled while reducing staff by 27%) would be of interest to other DOTs. We have shared this information with some DOTs.
<b>Illinois</b>	Our strong emphasis on the ISO 9001:2000 standards since 2003 have put a new focus on improved measurement; analysis and continual improvement. By implementing the ISO standard as IDOT's method of process management process information including standard operating procedures are managed better and communicated fully; allowing line staff to be better trained and informed on both procedures and goals that led to the procedures. This form of knowledge management is invaluable in an organization where more and more emphasis is being placed upon team building; multi-disciplinary staff work and approaches; job rotation; and mentoring programs. We have many improvements to make but the initial stages of this approach are very promising.
<b>Indiana</b>	INDOT is currently working on OPI's (see Note 2 in response to item 8)
<b>Kansas</b>	Pavement Management System (PMS): KDOT has developed and used a pavement management system since the early 1980's. Pavement condition is collected annually on the approximately 10,000 mile state highway system. The pavement condition is combined with other Agency data on geometric conditions, traffic, and available budget to prioritize the most needy project locations. Once the neediest locations have been identified and that portion of the budget is exhausted, an optimization system follows to select an optimal set of substantial maintenance project locations to meet Agency pavement performance goals. Since the early 1990's, the pavement condition has exceeded the goals every year. In 1983, 44% of the state highway miles were in good condition and about 19% were in poor condition. Currently 89% are good and less than 1% are poor. While there are many reasons for this improvement, the annual measurements have made pavement condition a priority and have helped KDOT request and maintain valuable state legislative support. Maintenance Management System (MMS): The Kansas Department of Transportation's Maintenance Management System is comprised of several systems; a Highway Maintenance Management System (HMMS); an Equipment Management System (EMS); a Shop Management System (SMS); and an Electronics System Maintenance Management System. All these systems are similarly structured for the purpose of gaining the greatest benefit in addressing KDOT's mission within the budgetary constraints imposed upon us. The systems aid in predicting the work required to maintain our highway system, determine the amount of resources needed to perform the work, and collect the resulting maintenance data when the work is performed; this in turn allows managers to do analysis, budgeting, scheduling, and evaluation.
<b>Maryland</b>	Although we strongly agree and agree on most of these statements, we are in the early- to- mid stages of revamping processes across the entire organization using the Baldrige self-assessment criteria.
<b>Missouri</b>	<a href="http://www.modot.mo.gov/about/general_info/Tracker.htm">http://www.modot.mo.gov/about/general_info/Tracker.htm</a>
<b>New Jersey</b>	NJDOT has a successful Succession Planning Program. See attached documentation for additional details. (Please refer to hard copy sent via USPS).
<b>New Mexico</b>	Dept's performance measures are part fo the State Government Accountability Act and reported on quarterly in our updated report. See previous website address given
<b>North Dakota</b>	We are working on improving our information systems and the communication of results in our performance measurement efforts. -- Our recruitment, succession planning, and mentorship programs are helping us work toward embracing change in our workforce and our workplace.

<b>RESPONSES TO ITEM 42: <i>Measurement, Analysis &amp; Knowledge Management Strengths</i></b>	
<b>Ohio</b>	ODOT has 64 performance measures which link directly to our strategic plan, our long-range plan and even to our annual performance evaluations. We are a performance measure-driven agency which uses short term performance objectives as interim milestones to reach biennial and decennial goals. Right down to our county operations, commonly understood and defined performance measures are used to define the success of programs.
<b>Pennsylvania</b>	The Highway Administration Customer Satisfaction (HACS) survey results are formally presented to each individual District Executive and his key staff people.
<b>South Dakota</b>	We have developed performance measures throughout the department that are linked to the strategic plan, however, they have not yet been implemented. Within the next few months that will be implemented.
<b>Texas</b>	Our Learning Content Management System (LCMS) is being used to capture intrinsic and extrinsic knowledge of various programs through a formalized process. We have assessment teams that are used to evaluate the transportation systems.
<b>Virginia</b>	The measurement and analysis processes VDOT utilizes are traditional. The knowledge management process is being established as an entirely new Office at VDOT. This is different than in most DOT's, where this function organizationally reports to another directorate.

**43** *How do you communicate the results from your performance measures within your organization?*

<b>RESPONSES TO ITEM 43</b>	
<b>Alaska</b>	Performance Measures, data tables and supporting information are contained within the State of Alaska website. Some measures are available to DOT managers through a web-based dashboard program.
<b>Arizona</b>	Each Division presents their performance measures to the monthly ADOT Operations Group (key leaders) on a rotational basis. Those key leaders are responsible for delivering the information to their groups. Measures are posted on websites.
<b>California</b>	We are currently working on Department-wide reporting. Individual programs within the Department prepare reports for their respective programs.
<b>Colorado</b>	Currently there are two performance reports that are placed on the intranet for any and all employees to peruse and use in development of their Work Programs and making day to day decisions. The two reports are the Annual Department Wide Performance Report (Investment/Upper level Management level) and the Core Service Report (Mid-management level) that are completed and reported annually and quarterly respectively. Presentations are also given to the Transportation Commission and the Executive Management Team as well as to other organizations within the department.
<b>Delaware</b>	Reports are distributed.
<b>District of Columbia</b>	DDOT communicates through discussions at staff meetings at the executive and administration level. We also work through our geographically based teams to communicate. We have also identified a special assistant to the Director to enhance; communicate and promote performance measures within the agency.
<b>Florida</b>	Currently we use newsletters; special documents; websites; quarterly and monthly reports postings; etc. to communicate results. By the end of this calendar year we will have deployed our performance management software statewide to report all the key performance measures of the department and to using the software for local tracking; reporting and analysis.
<b>Georgia</b>	The Georgia DOT is in the process of developing a method for communicating performance measure results throughout the organization.
<b>Idaho</b>	Through an annual performance report.
<b>Illinois</b>	We have established an internal website based on the Sharepoint software which enables an interactive and collaborative knowledge sharing site. Secretary Martin also makes an annual round of visits to District and Central Office staff including presentations on current status of performance measures for the organization as a whole and upcoming goals and objectives in every area.
<b>Indiana</b>	See Note 1 in response to item 8.
<b>Iowa</b>	1) Quarterly report to Department Director, who in turn discusses performance with Division Directors. Division Directors share information as applicable to individual employees. 2) Annual performance results are posted on the state's I3 data system for all citizens to review.

<b>RESPONSES TO ITEM 43</b>	
<b>Kansas</b>	At KDOT, we report on and publish internally our critical success factors, but do not distribute them widely. That's why we've embarked on the development and adoption of performance measures that will make us accountable both internally and externally.
<b>Louisiana</b>	We have initiated an effort to dashboard 5 key performance measures. We have recently begun an effort to institute performance measures throughout the agency but estimate that agency-wide good performance measurement is a couple of years away.
<b>Maine</b>	Typically we use newsletters or a direct letter from top leadership.
<b>Maryland</b>	Town meetings, memos, intranet, conferences, training.
<b>Massachusetts</b>	Only done at senior management level.
<b>Michigan</b>	Reports on performance measures are primarily focused on road and bridge construction programs.
<b>Missouri</b>	Quarterly review meetings called 'TRACKER REVIEW' Place our Performance Measures on the internet Distribute Performance Measurement tool TRACKER to stakeholders and partners
<b>Montana</b>	At staff meetings and website
<b>Nebraska</b>	Publication of Annual Report, report to State Legislature, etc.
<b>New Hampshire</b>	Hard copy or e-mail distribution. -- Discussion at staff meetings.
<b>New Mexico</b>	Dept internal and external website. Dept Newsletter. Monthly executive staff meetings Quarterly staff meetings. Twice a year conferences. Annual Dept conference. See Organizational Climate Survey attachment and website.
<b>North Carolina</b>	There is no formal method of reporting performance measures.
<b>North Dakota</b>	Our Input/Output Measures report is available (visible) to all employees (it is on our Intranet). -- We publish an outcome focused Performance Measures Report Card that is provided to the Legislature and is available to the citizens of North Dakota. This document summarizes input/output data into outcome information. -- Highlights of these reports are provided to our employees using a weekly internal communications document called the 'Grapevine'. All employees have access to this publication via our Intranet.
<b>Ohio</b>	Through biennial business plan documents, through annual meetings with employees, with dissemination of performance measure goals to work units, through the annual evaluation of managers who are responsible for achieving the performance measures and through a internal website.
<b>Oregon</b>	Currently in the process of redefining the entire performance management effort.
<b>Texas</b>	Copies of required reports are available on intranet websites by various organization units. Presentations made at various conferences and meetings.
<b>Utah</b>	Some measures are posted on bulletin boards, some are on an internal website, a few are on our public website."
<b>Vermont</b>	Strategic performance measures for all organizational components and asset categories are still being developed for the agency. As indicators are memorialized and coordinated among the operating divisions, periodic reports are provided by the Policy and Planning Division which has the responsibility for integrating a performance based management system for the Agency.
<b>Virginia</b>	As mentioned previously, a number of key performance indicators are tracked monthly, quarterly, and annually. Performance is tracked and reported utilizing a combination of internal and external reporting mechanisms such as the Public Dashboard System, Commonwealth Transportation Board Report Cards, and Monthly Videoconferences held with top leadership.
<b>Wyoming</b>	The Governor's Strategic Plan, WYDOT's Annual Report, and newsletter articles.

## Human Resource Focus

How your organization's work and learning systems motivate and enable employees to develop and use their full potential.

		% Distribution			
		Strongly Agree	Agree	Disagree	Strongly Disagree
<b>Mark the answer that best matches your opinion regarding each statement. Leave an item blank if you have no opinion or don't know. To change a marked box, click on it again, then click on your desired response.</b>					
44	We have good processes for identifying and projecting our staffing and training needs.	2	60	35	2
45	Our recruitment and hiring practices are effective for obtaining the talent we need.	0	60	40	0
46	Our approaches to job design, training, and workforce deployment give us the versatility and skills we need for high performance.	2	62	36	0
47	Our training and development programs and practices are effective in enabling employees to achieve both their performance potential and their career goals.	2	71	26	0
48	Our career progression, compensation, and related employee programs and practices motivate employee performance and support our retention goals.	2	40	48	10
49	Our programs and policies that affect employee well-being (e.g., health, safety, benefits, work environment, work schedules) contribute greatly to employee motivation and satisfaction.	7	63	30	0
50	I believe some of our <i>Human Resource</i> processes and practices are <i>Strengths</i> that some other DOTs would find of interest.	3	41	54	3
51	<i>If you answered "Agree" or "Strongly Agree" to the previous item, please give a brief description of the Strengths.</i>				

### RESPONSES TO ITEM 51: *Human Resource Focus Strengths*

<b>California</b>	The Department has established training programs in the various programs/divisions within, including academies for project engineers, project managers, planners, etc. Additionally, the Department has developed extensive training for mid-level management level as well as leadership training for potential upper-level managers. The Department has also established an Executive Development Program where candidates are selected to participate in a two year rotation program to broaden experience and prepare for executive level/upper-level management positions. The Department faces, as other public agencies, issues related to benefits, compensation etc. Benefits and compensation are subject to the collective bargaining process and subject to the approval by the legislature. Benefits and compensation are a continual concern of the employees and in light of current statewide budget issues they are difficult to address. Salaries have not kept up with inflation/cost of living increases and therefore the Department is not competitive compared with the private sector as well as with the public sector (small local agencies as well).
<b>Connecticut</b>	Downsizing, early retirements and hiring and promotional freezes over the past several years has made it difficult for the agency to meet its training and staffing needs.
<b>Delaware</b>	Our engineer recruiting program is very effective. We hired a retired military recruiter who is energetic and motivated to do the recruiting. One of the reasons he is successful is because he was hired for one job and that is his only responsibility. He also does an excellent job of following up in a timely manor. Another reason our recruiting has been good is because there is so much support from the top.
<b>District of Columbia</b>	the department provides training; certification programs; education improvement programs; the department has incentive programs for trained and certified employees

**RESPONSES TO ITEM 51: *Human Resource Focus Strengths***

<b>Florida</b>	While we still have some improvements to make in our overall Human Resource Focus area I believe some DOTs would find value in our annual Leadership and Human Resource Practices Survey (Annual Employee Survey) and in the work we have done in identifying best practices (HiQ Practices) for replication by other supervisors and units. Our requirement for each cost center to have an annual response plan to the survey has been very positive (as documented by the continued increase in overall survey scores and the decline in the number of items that indicate a strong need for improvement. As of June 2005 only 3 of 53 items remain on the need improvement list). In addition some DOTs might be interested in our flexible work schedules; telecommuting policy; educational leave with pay program; and other related HR practices.
<b>Idaho</b>	We have a good EIT training program and a good construction inspection/testing program.
<b>Indiana</b>	See Note 1 in response to item 8.
<b>Maryland</b>	Our Human Resources Department just completed a self-assessment. The issues in the above statements came out loud and clear. We identified opportunities for improvement and are aggressively working on improving our processes. We are not only optimistic about the changes, but excited as well.
<b>New Hampshire</b>	Training Program -- Safety Programs -- Orientation for New Hires
<b>New Jersey</b>	NJDOT has a successful Succession Planning Program. See attached for additional information. - - NJDOT has an extensive Career Development/Tuition Aid program that allows employees the opportunity to earn a degree with financial assistance from the state as long as a certain grade level is attained. It also provides employees to be reimbursed for individual job related classes at various institutions. See attached for additional information. -- NJDOT has an Office of the Employee Advocate that offers employees a place to go to discuss job opportunities as well as to obtain self improvement guidance. -- NJDOT has an Administrative College program that provides short, concise classes on a variety of topics for Managers and staff to assist them in their current jobs, as well as prepare them to move up in the organization. -- NJDOT has established a list of 'Desirable Qualities for Managers' for all current and future Managers in the Department. See attached.
<b>New Mexico</b>	Our Human Resource Focus has changed significantly in the last two years. Recognizing that our recruitment, hiring, retention and vacancy results were not competitive with the private sector, we have revamped many of these practices within our control including a recruitment specialist, the hiring of an employee compensation specialist, the identification of select positions that do not require approval from the state personnel office allowing the DOT to make immediate hiring decisions and offers to the right candidates.
<b>North Carolina</b>	44. Staffing and training needs are projected by work groups. 46. We have had some success in workforce deployment. 47. We provide a large range of professional and personal development programs to assist staff. 49. In place of adequate salaries, we expend extra effort at other methods of ensuring employee satisfaction. We pay special attention to areas that impact safety and employee health issues.
<b>North Dakota</b>	We conduct an organizational climate or employee satisfaction type survey every other year. The results of this survey are available to employees on our Intranet website and provided to customers and stakeholders in a printed report card. -- The department hosts new employee orientation sessions on a quarterly basis. Employees normally complete this requirement sometime within their first 6 - 10 months of employment. -- Individual development plans are developed for each employee as part of our annual performance evaluation process. These plans are supplemented by our Mentorship program, Leader/Supervisor development effort, and an employee Wellness program.
<b>Ohio</b>	We are training 2,200 highway workers and construction inspectors in a rigorous, formal process to certify them as flexible Highway Technicians. These Technicians will be certified as being competent in basic roadway maintenance, snow and ice treatment and basic project inspection. This flexibility will enable ODOT to have a workforce responsive to meet the diverse needs of our department. As the size of the construction program rises and falls in various districts, as snow and ice needs vary with climate and as seasonal maintenance needs arise, ODOT will have a core of well-rounded and well-trained employees to meet these demands.
<b>Texas</b>	Rapid Hire Program; Tuition Assistance Program; Recruitment Teams; Conditional Grant Program
<b>Virginia</b>	In the areas of training and development, VDOT has developed and implemented: 1) a Learning Management System that tracks and monitors employee learning and growth participation, 2) training programs for managers and executives, including the executive leadership preparation program, and 3) a consolidated training budget.

**RESPONSES TO ITEM 51: *Human Resource Focus Strengths***

***Wyoming***

We believe that WYDOT University might be of interest to others. However, it is a stand-alone training function, and not a part of Human Resources.

**Process Management** How your organization identifies and manages the processes that are key to your principal products and services.

		% Distribution			
<i>Mark the answer that best matches your opinion regarding each statement. Leave an item blank if you have no opinion or don't know. To change a marked box, click on it again, then click on your desired response.</i>		Strongly Agree	Agree	Disagree	Strongly Disagree
52	We have good ways of monitoring the productivity of our key processes to help us recognize improvement opportunities on a continuing basis.	10	43	48	0
53	Our process improvements of recent years are yielding great benefits in terms of "on-time/on-budget" performance, reducing waste and variability, and/or keeping us current with our direction and business needs.	18	59	23	0
54	In the past few years, we have found some significant ways to add value to our products and services.	19	69	12	0
55	I believe some of our <i>Process Management</i> systems and practices are <i>Strengths</i> that some other DOTs would find of interest.	8	45	45	3
56	<i>If you answered "Agree" or "Strongly Agree" to the previous item, please give a brief description of the Strengths.</i>				

<b>RESPONSES TO ITEM 56: <i>Process Management Strengths</i></b>	
<b>Arizona</b>	Rubberized asphaltic concrete pavement, also known as Quiet Pavement reduces noise levels of roadways. Contact Jim Delton Materials Engineer at 602-712-7286. Service Arizona is a website which enables a user to renew vehicle registrations obtain certain permits order specialized plates obtain a duplicate driver's license registration and perform a variety of other tasks electronically without ever going to a Motor Vehicle Division office. See the website: <a href="http://www.servicearizona.com">www.servicearizona.com</a>
<b>California</b>	We have monitored and evaluated on-time/on-budget" performance in the area of project delivery for a number of years and have seen significant improvement in our delivery.
<b>Colorado</b>	Because the department's Core Services have been in place for four years the 'Action Plans' that are currently in the development process seemed important to mention. The 'Action Plans' are reformatting the present process. Currently the Core Services are organizationally structured. In the future Core Services will be process structured and directly related to our services and linked (aligned) to the investment level goals and objectives. The day-to-day activities will eventually link to the department's mission through these 'Action plans' that have strategies and measures associated to each investment level objective. Finally!
<b>District of Columbia</b>	- the processes were developed by a consultant; FHWA and by the department. - implementation of these processes are in effect and proved to be successful; and is continuously modified as deemed necessary
<b>Florida</b>	We have begun a shift towards the concepts of process management over the last several years and have begun to make some inroads in this area. While not as strong as some of our other areas we have several key success stories in process management and could also serve as a model for "hanging in there" as the necessary culture changes take place.
<b>Illinois</b>	By embarking on the ISO 9001:2000 standard approach to process management our Division of Highways and related support offices such as Finance and Administration have taken great strides in developing improved consistency in the way we approach documentation and process improvements; training and process evaluations; customer service and feedback. Our immediate goal is to expand on our ISO 9001 certification to ensure that the entire Division of Highways and related administrative offices are in full compliance with the ISO standard and improved process management.
<b>Indiana</b>	See Note 1 response to item 8.

**RESPONSES TO ITEM 56: *Process Management Strengths***

<b>Kansas</b>	The Partnership Project was a systematic approach built upon market research data and a public process to identify key improvement areas. Those areas include: 1. Make KDOT a more desirable place to work; 2. Nurture better relationships with local governments; 3. Create KDOT's roadmap for continued success. KDOT has traditionally been a highly centralized agency but through the Partnership Project it has become apparent that our field structure is underutilized in making decisions and developing relationships with local governments. A conscious effort is underway to underscore the importance of Area Engineers and Bureau Chiefs and bring them more fully into the decision-making loop. By encouraging decisions to be made closer to the level where the impacts usually occur, we are confident that our decision-making process is improved. Likewise, by nurturing relationships with stakeholders and better understanding what they need in terms of products and services we are better positioned to meet their expectations.
<b>Louisiana</b>	Louisiana recently commissioned a change management effort and is investing dedicated staffing, consultant services, and significant staff time to institutionalize continuous quality improvement and performance measurement throughout the agency.
<b>Maryland</b>	Please see prior answers.
<b>Michigan</b>	The department has developed an effective approach to reengineer processes.
<b>New Hampshire</b>	Maintenance Activity Tracking System (MATS)
<b>New Jersey</b>	NJDOT implemented Project Management practices in delivering our Capitol Projects to construction. Project Schedules and budgets are established and maintained/updated monthly or as needed. (See Attachment) -- Our Commissioner implemented a Hyperbuild program that encourages innovating thinking, risk taking in an effort to have projects delivered and construction in a more efficient and cost effective manner. -- We have 4 different project 'pipelines' for project delivery: #1 - Classic large project that requires an EIS (Environmental Impact Study) #2 - Smaller project with Right of Way; Utility; Environmental (Categorical Exclusion) impact #3 - Quick fix type project that requires design and may have minimal right of way, utility and environmental impact #4 - Maintenance type improvements within existing right of way needing minimal design (See Attachment)
<b>New Mexico</b>	See 'Research Quality Initiative Briefing Book 2004'
<b>North Carolina</b>	We use periodic reporting from appropriate units to monitor our key business practices. We have seen marked improvement in the streamlining of environmental permitting and in living our Environmental Stewardship Policy. We continue to find ways to add value to our products and services.
<b>North Dakota</b>	We have done quite a bit of process analysis in our development and implementation of an Electronic Document Management System (EDMS). Under EDMS, if a process generated a paper document, that process has been mapped and analyzed; and subsequently changed (improved) as necessary. However many processes remain to be mapped, analyzed, and improved in our Business Process Review effort.
<b>Ohio</b>	Our performance measures and our cost accounting system have significantly contributed to improve performance, productivity and reliability. All common functions are tracked across all districts for cost and effectiveness. Best practices are singled out and spread across the department. All districts are held to common benchmarks of performance and are expected to raise sub-standard performance to the Departmental optimum. Some highlights are: The size of the construction program has risen from \$850 million annually to \$1.4 billion annually and 96 percent of projects are let to bid on time. Bridge and pavement deficiencies have been reduced by two-thirds; Basic, highway maintenance deficiencies have fallen by 62 percent; ODOT's fatality rate fell from 1.132 to 1.15 per 100 million vehicles miles of travel; Staffing levels have declined by 25 percent. Productivity is up significantly in almost all areas.
<b>Oregon</b>	Program volumes have doubled over the past three years, requiring a new business model - significant outsourcing. A dedicated function and leader for the project delivery business line within ODOT with the responsibility for process improvement.
<b>Pennsylvania</b>	1. Reducing waste and variability in snow and ice removal; 2. Driver and Vehicle services enhancements; 3. Highway safety improvement initiatives
<b>South Dakota</b>	52/53. At this time we don't have good ways of monitoring productivity. That will happen when we implement performance measures. However, we have an excellent program for finding process improvements called StorySolve (Registered Trademark) and have found over \$2 million in savings. 54 Our staff is continually evaluating new products and services and we feel that we have a good process developed for determining what new products are applicable to our needs.
<b>Texas</b>	Partnering programs, in the past, were effective in improving processes and reducing costs.

**RESPONSES TO ITEM 56: *Process Management Strengths***

<b><i>Virginia</i></b>	Related to question 53: VDOT has placed increased emphasis on management of the construction program in recent years. New monitoring tools, and new management reports are being used - such as the Dashboard, and the Watchlist. Increased accountability of project managers, and new reports to the public have helped the agency focus on improved results. Improvements in 'on-time, and on-budget' have been well documented. Related to question 54: VDOT has undertaken a major reorganization to improve the maintenance of the existing infrastructure, and the operation of the highway system. We anticipate better response times in incident management, improved ability to mitigate congestion, and better management of the existing assets.
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## Business Results

Your organization's performance and improvement in key business areas.

		% Distribution			
		Strongly Agree	Agree	Disagree	Strongly Disagree
<p><b>Mark the answer that best matches your opinion regarding each statement.</b>  <b>Leave an item blank if you have no opinion or don't know.</b>  <b>To change a marked box, click on it again, then click on your desired response.</b></p>					
57	The steps we have taken in recent years to strengthen our organization are paying off; our organizational performance is trending up.	18	61	20	0
58	I believe some of our recent <i>Organizational Performance</i> results and improvements would be of interest to other DOTs.	19	35	43	3
59	If you answered "Agree" or "Strongly Agree" to the previous item, please give a brief description of the most significant aspects of these results.				

RESPONSES TO ITEM 59: <i>Business Results Strengths</i>	
<b>Arizona</b>	Please refer to Question 56 above.
<b>California</b>	The Department is making great strides in this effort. It is work in progress and we expect to show significant improvement in the upcoming years.
<b>Colorado</b>	The department is currently going through a major Information Technology upgrade that is directly attributable to the Performance Measure program that is in place and Asset Management Program that is in the implementation phase. The department has installed an Oracle platform for the Enterprise Resource Planning program and is in the process of implementing SAP. This will enable all (If not all--most) of the data throughout the department to be integrated to allow Asset Management capabilities. The intention is to be able to do life cycle costing trade-off analysis and projections on an ongoing basis to feed resource allocation information and assist in the decision processes.
<b>District of Columbia</b>	our geographically-based teams approach has created an efficient project management program from planning through design and construction
<b>Florida</b>	The results of our employee surveys, customer surveys, acceptance of proposals by the legislature, and our bottom line results in delivering the work program all point to overall improved Organizational Performance.
<b>Illinois</b>	Since 2002 IDOT staffing has decreased by more than 1,000 workers (a 15 to 20 percent decrease), even as our program delivery has reached and sustained record-breaking activity. This fact alone points to improved organizational performance and productivity. Our challenge now is to continue to sustain this record-breaking pace with an extremely lean staffing contingent.
<b>Indiana</b>	See Note 1 in response to item 8.
<b>Kansas</b>	During June and July 2003, the Agency completed one-on-one interviews with senior KDOT managers, stakeholders outside KDOT who influence transportation decisions in the State of Kansas, focus groups with KDOT employees, and focus groups with transportation stakeholders in each of KDOT's six Districts. In August and September 2003, the Agency conducted two surveys. Information was gathered and analyzed from 15 focus groups and more than 1,900 stakeholders statewide, including 979 randomly selected Kansas residents, 586 city and county representatives, 79 legislators, and 278 contractors, consultants, and vendors. KDOT received high marks for the physical aspects of the state highway system.
<b>Maine</b>	We actively use a Unit Review Internal team to review all aspects of a particular unit. The team interviews every person in the unit as well as suppliers and customers. The team is made up of people throughout the Department who may or may not have a strong interest in the unit. We recently reviewed the Maintenance & Operations unit. A team of 9 people interviewed 1500 people in two months. Significant changes happened because of the review.
<b>Missouri</b>	<a href="http://www.modot.mo.gov/about/general_info/Tracker.htm">http://www.modot.mo.gov/about/general_info/Tracker.htm</a>

**RESPONSES TO ITEM 59: *Business Results Strengths***

<b>New Mexico</b>	Our overall organizational performance has improved in certain key areas including organizational climate, our special highway program, our commuter rail program and our overall transformation from an agency that focused on roads to a DOT. See 2002 Baldrige Application and 2004 results of Employee Opinion Survey.
<b>North Dakota</b>	The department has made progress in the areas of: Mentorship (Leader, Manager, or Peer combination) Succession Planning (28 key leader/manager positions in the department), and An Employee Wellness Program (Screening, physical activity, and life style education).
<b>Ohio</b>	Again, our performance measures have indicated continual improvement and constrained costs in all major areas of operation.
<b>Oregon</b>	Doubling of volume while maintaining historical delivery rates is an indication that our delivery system is efficient.
<b>South Dakota</b>	We are on the cusp of implementing performance measures and activity based costing. These steps have not yielded results yet but we are getting there.
<b>Virginia</b>	VDOT's core business areas of building and maintaining roads improved significantly from FY01 to FY05: Maintenance * 95% improvement in on-time delivery* 36% improvement in on-budget delivery. Construction * 275% improvement in on-time delivery * 53% improvement in on-budget delivery

**60 To what extent has your agency met its targets for *Business Results* over the last several years?**  
(Mark all that apply)

<b>Targets met:</b>	<b>Number of Responses</b>		
	<b>Over the last 2 years</b>	<b>Over the last 5 years</b>	<b>Over the last 10 years</b>
• In ALL areas	4	4	2
• In MOST areas	14	9	10
• In MANY areas	13	17	11
• In A FEW areas	7	2	6
• NONE	0	0	0

**61 What types of improvement programs, business models, and philosophies does your department utilize? Please identify the background source or basic concepts used in your programs and routine practices that serve to improve or sustain organizational performance. Refer to Glossary as needed.**  
(Mark all that apply)

**# of Responses**

17	National Quality Initiative (NQI)/National Partnership for Highway Quality (NPHQ)
16	Baldrige type (State programs or self-assessments based on the Malcolm Baldrige performance criteria)
7	W. Edwards Deming type (Quality management efforts based on writings of Deming, Juran, Crosby or Shewart)
0	Six Sigma type
4	ISO type
0	Lean type
15	None → <b>Proceed to Question 67</b>
9	Other – ( <i>please identify</i> ):
<b>Colorado</b>	variation of 'Management by Objective', 'Total Quality Management' and Baldrige
<b>Indiana</b>	INDOT is currently in the process of Reengineering, setting new performance measures, and setting goals for each measure.
<b>Montana</b>	Balanced Scorecard
<b>New York</b>	We have some experience with Deming and Baldrige, although we are not following any specific model.
<b>North Carolina</b>	CPI, our internal continuous process improvement program. It recognizes changes implemented down to the lowest levels of the department.
<b>North Dakota</b>	Our improvement programs embrace elements of several common quality program models and philosophies.
<b>South Dakota</b>	We are implementing Collaborative Performance Management, which incorporates performance measures, activity based costing, and process improvement.
<b>Vermont</b>	The Agency is assessing the options of using a consultant to work with staff and to develop a program for Continuous Quality Improvement
<b>Virginia</b>	VDOT identifies and reports on a small number of performance measures that affect how well we are delivering our products and services.
<b>Wyoming</b>	Balanced Scorecard

**62 How many years has your agency had these programs in place?**  
(Mark all that apply)

<b>Program</b>	<b>0 to 2 years</b>	<b>3 to 6 years</b>	<b>7 or more years</b>
NQI / NPHQ	2	6	9
Baldrige type	4	7	5
W. Edwards Deming type	0	2	5
Six Sigma type	0	0	0
ISO type	2	2	0
Lean type	0	0	0
Other ( <i>Described in question 61</i> )	2	4	1

**63 How broadly are these programs implemented?**  
(Mark all that apply)

Program	Local area or unit	Multiple areas & units	Agency wide
NQI / NPHQ	3	11	4
Baldrige type	1	8	7
W. Edwards Deming type	1	1	5
Six Sigma type	0	0	0
ISO type	0	4	0
Lean type	0	0	0
Other ( <i>Described in question 61</i> )	0	1	6

**64 What is your agency's current level of implementation with these programs?**  
(Mark all that apply)

Program	Initial Training	Expanding Use	Sustaining Use	De-emphasizing
NQI / NPHQ	1	6	9	1
Baldrige type	3	4	5	3
W. Edwards Deming type	0	1	5	1
Six Sigma type	0	0	0	0
ISO type	1	2	1	0
Lean type	0	0	0	0
Other ( <i>Described in question 61</i> )	2	2	2	0

**65 What impact have your programs had on your agency's performance and output?**  
(Mark all that apply)

Program	None	Some	Significant
NQI / NPHQ	0	13	2
Baldrige type	0	9	6
W. Edwards Deming type	0	5	2
Six Sigma type	0	0	0
ISO type	0	2	2
Lean type	0	0	0
Other ( <i>Described in question 61</i> )	2	2	3

**66 What is the level of interest of your agency's top leadership in these programs?**  
(Mark one in column A AND one in column B)

Column A <i>Level of Interest</i>		Column B <i>Increasing or Decreasing Interest</i>	
15	High Interest	16	Increasing
10	Moderate Interest	6	No change in last four years
4	Little Interest	4	Decreasing

**67 In considering organizational performance improvements, what are the two or three specific results that your agency would most like to achieve?**

**RESPONSES TO ITEM 67**

*(NOTE: Responses and State names have been randomly coded and sequenced)*

<b>B</b>	1) By instituting effective performance measures we can better allocate our resources and communicate our performance both internally and externally. 2) The development and implementation of a leadership development model will help people to fulfill their new roles in the agency.
<b>C</b>	1) Customer satisfaction 2) Improve human resources skills
<b>D</b>	1) Complete the Reengineering, identify performance measures, and set performance goals; 2) Significantly reduce the delivery time for future projects; 3) Improve project management and monitor projects to minimize budgets increases and project delays; and 4) Control supplemental agreements/change orders and avoid scope creep in both the Design and Construction phases of projects.
<b>E</b>	1) Increased efficient and effective delivery 2) Sustained legislative support for funding
<b>F</b>	Improved project delivery times and budget. More widespread use of performance measures Become better stewards of our environment
<b>G</b>	Since the program is just getting started it would be premature to list any results. Twelve process improvement teams produced 129 recommendations that are currently being implemented.
<b>H</b>	1) Have the ability to benchmark efficiency of work. 2) Maintain a stable, motivated workforce. 3) Produce an accurate short and long term schedule of work with predictable budgets that meets the needs of the public.
<b>L</b>	1) Reduction in Worker Claims as a result of improved employee safety 2) Reduce the 'down time' experienced at all levels with changes when people resign and/or retire - improved Succession Planning
<b>M</b>	1) Increased seatbelt use, 2) Reduced fatalities
<b>N</b>	1) Improved 10 Year Plan Process 2) Strategic plan linked/instituted w/State Long Range Transportation Plan 3) Develop meaningful performance measures to evaluate the Dept. of Transportation and the state's transportation system
<b>P</b>	1) More timely project delivery. Our project delivery process needs improvement. -- 2) Recruitment and retain employees. -- 3) Better coordination between planning officials in local agencies and transportation officials.
<b>Q</b>	1) Consistent application of performance management goals throughout the Division of Highways and related administrative offices. -- 2) Improved employee satisfaction on the job, and improved motorist/traveler satisfaction with construction, operations and maintenance efforts -- 3) Continued successful delivery of program promises to the public from year to year.
<b>S</b>	An end result the department would like to achieve is to reduce fatalities, injuries and property damage on the highways. A means to track performance is record percent change in road related fatalities on state roads per 100 million vehicle miles traveled compared to a baseline average for the past five years. Strategies to achieve increased performance include increasing the percentage of the system that meets current standards and reduce the number of signalized intersections that have a service rating of E or F.
<b>U</b>	Our Dept's Identified Tangible Results
<b>V</b>	1) Advertise projects more uniformly throughout the year. 2) Optimize the assigned activities of employees between maintenance and construction during seasonal peaks and off-peak periods.
<b>W</b>	1) Completing projects on time and within budget. -- 2) Training -- 3) Improve hiring practice / Adequate staffing levels
<b>X</b>	1) Improved delivery and reliability of estimates (on time and within budget) 2) Improved employee retention 3) Decreased wait times at DMV
<b>Y</b>	1) Customer Satisfaction. 2) Employee Effectiveness and Well-Being. 3) Knowledge Of And Communication With Our Stakeholders. 4) Safety Off/On Our System. 5) Quality Of Our System and Services.
<b>AA</b>	1) Attaining pre-set levels of quality in our output 2) Reaching the point where the strategic plan drives day-to-day activities
<b>BB</b>	1) Broaden the use of performance measures at all levels of the department. 2) Tie measures to budgeting and develop more cost and productivity measures.
<b>DD</b>	1) Projects on time and on budget with good data 2) Worker safety improvements
<b>EE</b>	1) Improved Employee satisfaction with job and personal performance. 2) Improved customer satisfaction.
<b>FF</b>	1) Broader acceptance of process management as "the way of doing business" in all aspects of business 2) Implementation of formal benchmarking with other DOTs and related industry

<b>RESPONSES TO ITEM 67</b>	
<i>(NOTE: Responses and State names have been randomly coded and sequenced)</i>	
<b>GG</b>	Training the next generation of leaders
<b>HH</b>	Financial and personnel resources to implement more performance type measures. Lack of Direct control over our Department's operations especially in regards to Human Resources and information technology issues.
<b>II</b>	Still remaining for us are achievement of goals for accident reductions and congestion relief. In nearly all other major areas we are achieving our goals.
<b>JJ</b>	We are primarily striving to accomplish results in the following areas: Mobility & Reliability; Safety; Security; Environmental Enhancements; Economic Competitiveness
<b>KK</b>	1 )Without a doubt, an objective would be improved accountability to our myriad customers measured in fiscal responsibility and quality. In other words - on time and on budget. 2) No less important is creating a sense of employee empowerment and responsibility, the recognition that every task is important and that ideas for improvement from within the organization are encouraged.
<b>LL</b>	1) Leadership excellence 2) Use of performance measures
<b>NN</b>	1) Improved plan quality; 2) Reduced Construction Claims; 3) On time and within budget delivery
<b>OO</b>	1) Increased efficiency in delivering construction and maintenance projects to the public. 2) Increased positive perception of the department delivering our goods and services.
<b>QQ</b>	1) Better quality plans that would result in less change orders in Construction 2) More accurate project cost estimates, this would enable us to better plan our Capitol Program. We are implementing TRANS*PORT and have started electronic bidding, and an overhaul of how we manage project costs. (See Attached Newsletter)
<b>RR</b>	1) Meeting objectives and goals as desired by the executive office, legislature and DOT Commission; 2) Demonstrating to the general public and special interest groups the value and benefit of the work of the DOT.

**68 What are the challenges and issues that hinder your agency's organizational improvement programs and efforts? (Attach additional sheets if necessary)**

<b>RESPONSES TO ITEM 68</b>	
<i>(NOTE: Responses and State names have been randomly coded and sequenced)</i>	
<b>A</b>	1. Internal communication -- 2. Recruitment and retention -- 3. Employee morale
<b>B</b>	1. Limited resources and staff time; 2. Limited expertise; while consultants are helpful they are not always feasible to use; 3. Our agency has traditionally been centralized; it will be a challenge to shift away from a production line approach and towards becoming more decentralized with a more team-like approach.
<b>C</b>	Inadequate transportation funding to meet the demands. - Like many other agencies, recruiting and maintaining an appropriate and excellent workforce is increasingly more difficult
<b>D</b>	1) In order to achieve our new objectives, some State laws may need to be changed/revised/established. 2) we rely on several other State and Federal Agencies for the timely completion of projects within the original project budget. Improved cooperation with EPA, the Army Corps of Engineers, State Department of Environmental Management, State Dept of Natural Resources, etc. is essential for your new improved project goals. 3) Improved communication and advanced partnering is needed to reduce the number and amount of construction claims submitted during and at the end of projects by contractors.
<b>E</b>	Mostly around the internal inertia to maintain status quo. Nothing new on this issue, however without sustained leadership it becomes difficult to implement sustainable change.
<b>F</b>	1. Political pressures to solve/resolve short-term issues. 2. Unlimited needs chasing scarce resources.
<b>G</b>	1. Communication 2. Buy-in from the staff 3. Lack of empowerment of the staff
<b>H</b>	1. We don't have appropriate benchmarking tools. 2. Unclear visions that relate to all levels of employees.
<b>J</b>	Operations tempo makes it difficult to train employees in all but the most important areas. Continuing redirection of priorities and methods of funding by the legislature. Having to modify operations based on reduced and/or restricted funding. Legislation that effectively eliminated the employee incentive program.
<b>K</b>	Resistance to change. Over half of the organization can retire and we are losing valuable experience.
<b>L</b>	Our workforce is quite lean through our continuous improvement and efficiency efforts. We face the normal challenges of training and retaining new professionals as we lose our long term employees to retirement.
<b>M</b>	1) Uncertainty of or reduction in funding 2) Lack of support from state legislature 3) Workforce issues: difficulty attracting and retaining qualified employees, impending retirements of difficult to replace employees, etc. 4) Lack of a real" strategic plan and goals 5) Lack of senior leadership commitment (this expected to change under new Director) 6) Failure to hold individuals accountable for performance results"

**RESPONSES TO ITEM 68**

*(NOTE: Responses and State names have been randomly coded and sequenced)*

<b>N</b>	> High vacancy rate that limits time and staff availability to advance organizational improvement initiatives. > Lack of pro-active commitment from entire leadership team. > Recent reorganization which transferred IT staff to centralized state office which impacts our direct control of IT involvement associated with quality improvement initiatives.
<b>O</b>	Staffing limitation & state funded resources.
<b>P</b>	Staff is so busy doing their jobs that we don't take the time to stop and see or find a better way.
<b>Q</b>	1) A less than integrated approach to human resources recruitment and management. -- 2) Losses of our most experienced and knowledgeable professional staff as a result of increased competition for human resources talent from the private sector. 3) Targeted approaches to provide more effective technical and executive leadership training where it is needed most in our organization. 4) Convincing more middle managers of the importance of process management and other organizational improvement methods. 5) Instilling more effective personnel management techniques at every management level.
<b>S</b>	Recruiting and retaining staff
<b>T</b>	Limited budgets. -- Limited staff. -- Lack of commitment by leadership. -- Leadership changes. -- We experience continuously changing leadership due to the political nature of the organization. New leaders bring new goals and new management styles. It is difficult to establish long-term goals and programs. Also, periodic leadership changes provide less incentive for new leaders to improve quality, because results may not be realized for many years, long after the leader has been replaced. There is greater incentive to cut the bottom line or to institute programs that are highly visible (fix bridges, plow roads, pave roads, fill potholes, etc.) Quality programs often take time to measure and yield results, so they are often invisible" for many years. Invisible results aren't particularly attractive to voters.
<b>U</b>	1. Organizational Culture 2. Overall Resistance to Change
<b>V</b>	-Willingness to take risks -Willingness to fail and learn from the experience -Broad acceptance that the best way to do anything hasn't been invented yet -The need for a stronger commitment at all levels of leadership for change.
<b>W</b>	1) Limited resources (manpower and funding) -- 2) Lack of support from upper management -- 3) Internal red tape -- 4) Changing priorities -- 5) Increasing workload -- 6) Hiring constraints -- 7) Insufficient lead times -- 8) Lack of training
<b>X</b>	The conflict between the need to control the outcome and the ability to allow creativity that would foster the spirit to attain the goal. -- Limited baseline data. -- No performance measures in place to track many significant issues. -- At times, process changes are made, with no tracking of the before and after condition to assess whether improvement was made or not. -- Many of the needed improvements require the cooperation or involvement of external agencies, over whom we have no control or persuasion, and who have no stake in the improvement.
<b>Y</b>	Changing our corporate culture to: a. Embrace change. b. Acknowledge accountability c. Accept comparability issues.
<b>AA</b>	1) Lack of follow-through and accountability 2) In some instances, lack of clear definition of roles and responsibilities
<b>BB</b>	Declining resources make it difficult to devote resources to developing measures and do the data collection needed for the measures.
<b>CC</b>	Large organization (20,000+) and multi-faceted. Communication internally (to all levels) and external. Buy-in to process.
<b>DD</b>	- Lacking an Executive Management level member specifically focusing on strategic planning (i.e. - there is not a strategic planning office) - Adequate communication between the management levels does not occur - Managers are typically technical in nature
<b>FF</b>	While we have overcome many of the barriers over the last 20 years of practicing quality management we still face some of the traditional barriers that many if not all programs face. We have the challenge of quality efforts being seen as 'additional work' rather than a way of doing business. We have the challenge of the push for production subduing the passion for performance. We have the challenge of middle managers being 'caught in between' leadership desires and employee needs and expectations.
<b>GG</b>	Politics
<b>II</b>	None, really. There always are issues with ensuring that we have the correct performance measures, that we gather data accurately and that we accurately capture costs. However, there are no major external or internal impediments, merely the need for continuous refinement.

**RESPONSES TO ITEM 68**

*(NOTE: Responses and State names have been randomly coded and sequenced)*

<b>JJ</b>	"Transformation" as it is referred to in our agency at the moment is unsettling to many people because the old way of doing business has changed and the new way is not fully understood. Resistance to change is one hurdle. -- We also recognize that communications is critical and difficult.
<b>KK</b>	The individual legislative and committee process focuses on local/regional projects with less regard to overall system performance. A distinct challenge is to communicate and influence changes in legislative direction and resource allocation that support a multi-modal transportation system using an asset management based decision-making process and a performance-based budget.
<b>LL</b>	Creating excitement for the changes; Making sure everyone knows how to use the performance measures; Having good positive conversations about results and how to improve; Buy in
<b>NN</b>	Staff is small with too many responsibilities; We do not have enough people to work on organizational improvement programs. A recent budget crunch has put a lot of our projects on the shelf.
<b>OO</b>	The following impediments to our programs are those identified in our strategic plan dated July 2005. Organizational change is not easy and it is not embedded overnight. The Department will be 100 years old next year. While the right steps have been taken over the last few years to bring heightened awareness and accountability to the business of delivering surface transportation, more changes have to happen. Key questions for the near term are: How do you attract, retain, and develop future leaders in a growing competitive job market? How do you adjust staff and overhead levels to recognize change in the delivery of transportation functions? How should the delivery of transportation be organized? Is the current structure supportive of this delivery? At the same time that demand and costs are increasing, the transportation network has unmet challenges with slow-growing revenues to address them. The challenges are similar to the growth that has occurred from 1986 to 2003. -33% increase in the number of licensed drivers (Source: DMV); -49% increase in the number of vehicles miles traveled; 67% on roads physically maintained by DOT (Source: Highway Statistics); -51% increase in the number of registered vehicles (Source: DMV); -From 1986 through mid-2005, dedicated transportation revenues buying power has diminished by 43 percent. (Source: CPI Inflation Calculator); Future state transportation revenue growth based on the official revised estimate in May 2005 is 3.2 percent. Federal funds are now the largest single source of revenue for the highway programs. Even assuming benign growth in federal revenues, the ability to match those revenues ends in 2023.
<b>PP</b>	1. Redirected resources due to ERP implementation; 2. Loss of job knowledge due to retirements and staff turnover
<b>QQ</b>	Funds, politics and manpower.

69 Please list up to five other DOTs you believe have implemented organizational improvement programs or practices that might offer useful lessons for your agency or other DOTs. Indicate any particular programs of interest.

<b>State</b>	<b>Number of Listings</b>	<b>Programs Mentioned and Comments</b>
Florida	14	maintenance outsourcing; Performance Management; project delivery and project management
Washington	11	Accountability and Communications pages on website; performance journalism; training and the use of performance measures
New Mexico	9	performance measures; Performance reporting documents/annual reports
Pennsylvania	9	(though may be on the decline now)
Virginia	8	Website (Their dashboard); Public Private Partnerships; dashboard on website
Arizona	7	partnering program
Maryland	7	Quality and Partnering programs
Texas	6	Public Private Partnerships; program management
Minnesota	5	Performance Management; resource management
Ohio	4	
Kentucky	3	
New Jersey	3	consultant management; Expedited program delivery
Utah	3	in the overall management of its infrastructure, as measured by Governing Magazine.
Kansas	2	
Missouri	2	(particularly with new leadership)
Wisconsin	2	quality of its professional managerial class and the professionalism of its staff.
California	1	Public Private Partnerships
Colorado	1	
Georgia	1	
Idaho	1	
New York	1	
North Carolina	1	
Oklahoma	1	use of sufficiency indices to track long-term performance of two-lane highways.
Oregon	1	
Tennessee	1	
Vermont	1	Civil Rights
<b>Total</b>	<b>106</b>	

## B. Research Methods

**Suggested script for use when making phone calls to person in dept who will be responsible for getting survey completed. The phone call will come AFTER they have received the survey.**

Hi (name)

My name is ----- and I'm working with *Oasis Consulting Services* conducting a research study on organizational improvement programs and practices for the AASHTO Standing Committee on Quality. I understand you are the person from your department who has been designated as the "point person" to ensure that this survey is completed. (Confirm) Great. I'm assuming you have received the survey? (Confirm)

The purpose of my call today is to review the purpose and design of the survey, answer any questions you may have, and make sure you know who to contact if you have additional questions as you complete the survey. It should only take a few minutes. Is this a good time for you to spend a few minutes doing that? (Confirm) *If not, make an appointment to call back within the next couple of days.*

As you are aware, the AASHTO Standing Committee on Quality, through the National Cooperative Highway Research Program, has contracted with us to conduct research of state departments of transportation to learn about programs and practices that positively affect organizational performance. The end result of the research will be guidelines that transportation departments can use to assist them in achieving performance excellence.

We plan to capture best practices from transportation departments throughout the country and design a guidebook that will provide practitioners with concrete guidelines to be able to implement quality practices. The Guide will include information about what other state transportation departments are doing in this area and also describe how they are doing it. The goal is to provide a toolbox of practices that can easily be used by all state transportation departments to increase or improve organizational effectiveness.

**We appreciate your taking the time to complete the survey.** It is designed to help organize and collect the relevant information about your agency's programs, systems and practices. We suspect that you will probably need to gather data from other members of your department to fully complete it. We have tried to make it as brief as possible and yet still capture the desired information. We believe the survey should take about an hour if one person was to complete the entire survey. You may want or need longer if you involve others or elaborate on some of your programs that have worked well, and, of course, that is what we're looking for so we will appreciate any extra effort.

*Review survey briefly and see if they have any questions.*

*Oasis Consulting Services*

After analyzing the results from this survey, we may need to conduct a follow-up, either by phone or email. Once we have completed our survey and analyzed the data, we will be selecting ten departments of transportation for site visits to gather more detail about how practices are actually implemented. We anticipate the site visits will be sometime in the fall and we anticipate the guidelines will be completed and presented to the oversight panel for this project by next February.

(name) I appreciate your taking the time to talk with me today and very much appreciate your investment in completing the survey. Please call or email me any time if you have questions. My phone # is ---- and my email address is -----.

Thanks again and I look forward to receiving your survey.

### C. Selection Process for Site Visits

All 45 of the surveys were reviewed for completeness and interest. During this initial review eighteen (18) states were eliminated as possible site visits due to the lack of response or indication (by the respondent) of any category that would be of interest to other State DOT's.

We then identified the following basic criteria to assist in identifying the states worthy of site visits:

- How many categories the state indicated might be of interest to other states (the more the better)
- Why they thought it might be of interest
- The quality of what was of interest (not run of the mill)
- The number of "Outstandings" in section 1 of the survey
- Response to Item 61 – any quality tools or practices in place
- Whether those practices were implemented agency wide
- If there was significant or moderate impact as a result
- Overall completeness of the survey

At this point each member of the team reviewed the remaining 27 responses twice, once for overall interest and a second time against the criteria, and placed them in priority order. A consensus seeking process followed, resulting in the unanimous agreement of the top nine and a tie for tenth place. The eleven sites were Arizona, Florida, Illinois, Maryland, Missouri, New Mexico, New Jersey, North Dakota, Ohio, Virginia, Washington, D. C.,

These top 11 were then considered against the highest-ranking states identified from Item 69 on the survey that asked respondents to list other DOT's they believe had implemented organizational improvement programs or practices that might offer useful lessons for others. Those states are:

<u>Rank</u>	<u>State</u>	<u># of Mentions</u>
1	Florida	14
2	Washington	11
3	New Mexico; Pennsylvania (tie)	9
4	Virginia	8
5	Arizona; Maryland (tie)	7
6	Texas	6
7	Minnesota	5
8	Ohio	4
9	Kentucky; Utah; New Jersey (tie)	3
10	Missouri; Wisconsin (tie)	2

Unfortunately Washington and Wisconsin were two of the six states that did not submit a response. Responses from Pennsylvania, Minnesota, Kentucky, and Utah self reported

nothing of interest to other states. Florida, New Mexico, Virginia, Arizona, Ohio, New Jersey, Missouri and Maryland were already included in our top 11 for site visits. That left Texas on the referred list but not quite in our top group. It actually came in 12<sup>th</sup>. We reevaluated it against those in the top group but determined that the information for Texas was not strong enough to replace what the other states had to offer.

It should be mentioned that this survey was a self-report and if a state responded only by checking the boxes and offered no additional information, it was not considered. It was deemed that if there was interest in sharing this information there would have been some description.

### **Summary of the Candidates for Site Visits**

This section presents a brief overview of each of the ten sites that made the cut, and why they were selected for a site visit.

**Arizona** – five categories with areas of interest; use of Baldrige and Deming practices agency wide for organizational performance and also use NPHQ and ISO in multiple units.

**Florida** – areas of interest in all seven categories, plus extensive use of Baldrige, Deming, and ISO agency wide

**Illinois** – areas of interest in six categories; use of Deming, ISO in multiple areas with moderate to significant impact and increasing interest

**Maryland** – six categories with areas of interest, use of NQI and Baldrige in multiple areas; in the early stages of revamping processes and use of Baldrige.

**Missouri** – indicated outstanding on many of the practices and tools in Item #1; use of Baldrige in multiple units, with increasing interest and significant impact

**New Jersey** – five categories with areas of interest; use of NQI and Baldrige in multiple areas; expanding interest.

**New Mexico** – six categories with practices of interest; use of NQI and Baldrige (agency wide) with significant impact

**North Dakota** – all seven categories had areas of interest, with use of NQI, Baldrige and Deming practices in multiple units. These practices are expanding and there is increasing interest.

**Ohio** – areas of interest in all seven categories, plus extensive use of Baldrige agency wide with significant impact

**Virginia** – interest in practices in all seven categories; VDOT has identified practices that serve to improve or sustain organizational performance. VDOT identifies and reports on a small number of performance measures that affect how well they are delivering their products and services

**Washington, D. C.** – had multiple areas of interest, but declined a site visit.

### **States for Additional Follow-up**

In addition to the above candidates for site visit, there were several states that had at least one practice or category of interest. We wished to explore these further to assess best practices for possible inclusion in this guide and requested additional information from them. We received responses from Kansas, New Hampshire and Michigan.

## D. How Site Visits Were Conducted

Once the sites were selected for a visit, we contacted, either by phone or email, or both, the selected sites to ask if they would be willing to host a site visit.

We designed a *Benchmark Research Guide* (Exhibit D.1) to ensure consistency in the site visit and interview process. The Research Guide assisted in clarifying common issues, but each of the states' processes and practices were so unique that the site visit had to be tailored to each individual state. We also developed a *Menu of Common Questions* to be asked, (Exhibit D.2) but, for the most part, the responses to the survey drove the kind of questions that were asked and the interviews that were set up. The on-site interviews were to elicit opinions and information to supplement and clarify the data gathered from the survey, and gather more detail and lessons learned to identify strategies that have led to successful implementation and acceptance of quality management systems across the agency.

One member of the Oasis Consulting Services group and one member from the SCoQ Panel participated in all but one site visit. (Due to a family emergency two Oasis consultants made one of the visits.) This provided a depth of perception and experience to explore each of the sites.

The majority of the site visits were conducted in one day. On two occasions, we spent a second day to either participate in a management meeting or meet with others not available on day one. These were very full days with non-stop interviews of different people in the agencies who were responsible for the practices the department had indicated would be of interest to other state DOT's.

Upon completion of the site visit, those visiting compared notes and compiled a report of their findings. It was these findings that led to the determination of the common themes among the departments.



## Exhibit D. 1

### **Menu of Possible Questions for Use in Site Visits (if not identified in survey response)**

- Is there a unit in the department that is primarily responsible for supporting organizational initiatives?
  - If so, describe that unit's resources, range of responsibilities and authority
- Are there other units (in the department or other state agencies) that provide significant support for organizational performance initiatives, programs and processes? If so, what is the role?
- In the Leadership Category:
  - When was the current secretary/commissioner/director appointed?
  - Describe secretary's involvement in organizational performance programs and processes
  - If you get to talk with the secretary/commissioner/director....how and why they got interested in organizational improvements
- Does the governor's office or state legislation require specific programs or processes related to organizational performance? If yes, describe the impacts on DOT programs and processes.
- Is there a Board or Commission? If yes, describe its role and involvement in organizational performance programs and processes.
- To what extent are you centralized or decentralized? Does this factor into organizational performance programs or processes?
- In our discussion of specific strengths and practices, have we overlooked any overarching, agency-wide factors that encouraged or enabled the development of these strengths and practices?
- Have we overlooked any direct or indirect benefits that your department has received from these attempts to improve organizational performance?
- Have we overlooked any negative results (internal or external)?
- Has your department agency considered the use of Six Sigma, ISO, or Lean approaches to improve organizational performance? What were your conclusions?

- To what extent is your department involved with NQI/NPHQ? What is the relationship with the department's other organizational performance programs and processes?
- What advice would you offer to other departments just beginning to implement programs or processes similar to yours?

**Exhibit D.2. Benchmark Research Guide:**

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# ORGANIZATIONAL IMPROVEMENT PROGRAMS AND PRACTICES IN STATE DOTs

*Site Research Guide*



*AASHTO Standing Committee on Quality*



Agency Name: \_\_\_\_\_

Date Completed: \_\_\_\_\_

**Principal Agency Contact**

**Project Team Researchers**

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Email: \_\_\_\_\_

➤ \_\_\_\_\_  
➤ \_\_\_\_\_  
➤ \_\_\_\_\_  
➤ \_\_\_\_\_

Agency: \_\_\_\_\_

Researcher(s): \_\_\_\_\_

<b>1</b>	<b><i>Review &amp; Summarize Strengths</i></b>	<p>a) Identify from Question 1 the items marked as having an “Outstanding” or “Significant” contribution to performance.</p> <p>b) Make a summary list of the responses to items 8, 15, 22, 42, 51, 56, 59 combining responses related to strengths identified in 1.a.</p> <p>c) Supplement the Strengths list with key phrases from items marked “Strongly Agree” or “Agree” (among items 2 through 58).</p>
<b>2</b>	<b><i>Review History of Quality &amp; Related Practices</i></b>	<p>Items 61 through 66 asked about the agency’s use of Quality principles and practices, and/or other means of achieving organizational improvement. Since documenting the extent and nature of these practices is one of the principal research objectives, prepare a summary of the responses to these items as a basis for inquiry.</p>
<b>3</b>	<b><i>Identify Key Questions</i></b>	<p>For each of the avenues of inquiry developed in Steps 1 &amp; 2, generate key questions, including <i>but not limited to</i>:</p> <p>a) What are you doing by way of (Strength X or Practice Y)?</p> <p>b) How does it work?</p> <p>c) What have been the impacts?</p> <p>d) Why did you decide to invest in this? (Driving forces)</p> <p>e) How has this come about? (Key decisions, people, events; gateways &amp; barriers)</p> <p>f) What do you foresee for the future (relative to Strength X or Practice Y)? (Status quo, enhancements, replacement)</p>
<b>4</b>	<b><i>Identify Research Sources</i></b>	<p>Who are the best people to interview and what are the best documents to seek out? Review what is available on the web and any supplemental information the agency may have submitted with the survey.</p>
<b>5</b>	<b><i>Reach Agreement on Research Plan</i></b>	<p>Reach agreement with your research teammate on a preliminary research plan based on the results of Steps 1 through 5. Then reach agreement with your agency contact to refine the plan and determine how best to implement it. This may result in opportunities to obtain key documents for review in advance of your visit, or the need to arrange for conference calls with key sources who will not be available for your visit.</p>

Agency: \_\_\_\_\_

Researcher(s): \_\_\_\_\_  
\_\_\_\_\_

**1**

**Summary of Strengths**

[Empty box for Summary of Strengths]

**2**

**History of Quality & Related Practices**

[Empty box for History of Quality & Related Practices]

Agency: \_\_\_\_\_

Researcher(s): \_\_\_\_\_  
\_\_\_\_\_

**3**

**Questions:**

- “What are you doing?”*
- “How does it work?”*
- “What are the impacts?”*
- “Why did you choose to do this?”*
- “How has this come about?”*

**5**

**Research Sources**

Agency: \_\_\_\_\_

Researcher(s): \_\_\_\_\_  
\_\_\_\_\_

# 6

## *Preparation & Follow-up Steps*

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## **F. Glossary**

### ***Glossary terms:***

#### **Balanced Scorecard**

The balanced scorecard is a strategic management system used to drive performance and accountability. It balances traditional performance measures with key indicators in four dimensions: financial, operational excellence, employees, and customers.

#### **Baldrige (Criteria for Performance Excellence)**

Baldrige offers an overall organizational approach that focuses on performance excellence for the entire organization. It concentrates on identifying and tracking all-important organizational results: customer, products/service, financial, human resource, and organizational effectiveness.

#### **Benchmarking**

Benchmarking is an improvement tool whereby an organization measures its performance or process against others' best practices and uses the information to improve performance. It is the concept of discovering what is the best performance being achieved anywhere (another agency, competitor or different industry).

#### **Continuous Improvement (CI)**

CI is an ongoing effort to improve products, services and/or processes. Formal methods of continuous improvement include Six Sigma, lean, and total quality management.

#### **Dashboard**

A dashboard is a tool used for collecting and reporting information about vital customer requirements and/or business performance. Dashboards provide a quick summary of process and/or product performance.

#### **ISO 9000**

ISO 9000 is a set of international standards on quality management and quality assurance. It concentrates on fixing quality system defects and product/service nonconformities. It includes ISO 9000:2000 (definitions), ISO 9001:2000 (requirements) and ISO 9004:2000 (continuous improvement). The ISO 9000:2000 series of standards is based on eight quality management principles: customer focus, leadership, involvement of people, process approach, system approach to management, continual improvement, factual approach to decision making, and mutually beneficial supplier relationships.

#### **Kaizen**

Kaizen is a Japanese term that means continuous improvement. A Kaizen Event is any action whose output is intended to be an improvement to an existing process.

## **Kanban**

Kanban is a Japanese term meaning “signal.” It is one of the primary tools of a JIT (Just In Time) system, signaling a cycle of replenishment for production and materials. It maintains an orderly and efficient flow of materials throughout the entire process.

## **Lean**

Lean (sometimes called Lean Enterprise) is an initiative focused on eliminating all waste (any activity that consumes resources but creates no value to the customer) from processes. Lean thinking reduces cycle times and streamlines processes by removing non-value-added steps.

## **Performance Measurement**

Performance Measurement is the use of indicators to track success in accomplishing goals. The goals can be strategic or tactical and the indicators can focus on outputs, outcomes, efficiency, effectiveness, or other aspects of organizational or system performance. Performance measurement can be undertaken as part of other management initiatives or as a separate effort to enhance decision-making, improve accountability, or motivate improvements.

## **Quality Assurance/Quality Control**

QA/QC is a system of procedures, checks, audits, and corrective actions to ensure that activities, processes, or products comply with established standards and customer requirements.

## **Quality Improvement**

Quality Improvement is a systematic and continuous activity to improve all processes and systems in the organization to achieve optimal level of performance.

## **Quality Management**

QM is the application of a formalized system to achieve maximum customer satisfaction at the lowest overall cost to the organization, while continuing to improve. Key characteristics include: a customer focus, leadership commitment, employee involvement, process approach, continual improvement, fact-based, data-driven problem solving and decision making, and developing supplier relationships.

## **Reengineering**

Reengineering, sometimes referred to as Business Process Reengineering (BPR) or Process Management, is the fundamental rethinking and radical redesign of processes to achieve breakthrough improvements in time, cost, quality, or service. It defines macro and micro processes, assigns ownership, and creates responsibilities for the owners.

## **Six Sigma**

Six Sigma is a methodology that provides organizations with the tools to improve the capability of their processes. It is an approach for improving measurable results for any organization. The term sigma refers to standard deviation, a measure of variation. Processes that function at higher sigma levels exhibit less variation, which means fewer defects.

**Stakeholder**

Stakeholders are people who have a vested interest in the outcome and are affected, in some way, by the actions taken by an organization.

**Strategic Management**

Strategic Management is a systematic approach to leadership that emphasizes the alignment of mission, vision, values, goals, objectives, roles and responsibilities, and the allocation of resources. It is continuous and adaptive and distinct from one-time initiatives.

**Systems Thinking**

Systems Thinking is any process of estimating how local policies and actions influence the state of the neighboring universe.

**Total Quality Management (TQM)**

TQM is a management approach to long-term success through customer satisfaction. All members of an organization participate in improving processes, products, services and the culture in which they work. A core concept in implementing TQM is Dr. Deming's 14 points, a set of management practices to help organizations increase their quality and productivity.

**Value Stream Mapping**

Value stream mapping is a tool that helps you to see and understand the flow of material and information as a product or service makes its way through the value stream. It differs from Process Mapping in that it gathers much more information, tends to be at a higher level, and tends to be used to identify where to focus future projects.

## G. Overview of Transportation Agencies Visited

This section presents a brief profile of each of the ten departments visited as part of the project. Although these state DOTs were selected based on the criteria described above, they provide a representative cross section of all state DOTs. They are similar in many ways, primarily in their core responsibilities for the state-owned highway system.

However, these DOT are also different. The CEOs are appointed in different ways, and some of the CEOs are accountable to boards or commissions in addition to state elected officials. Some of these DOTs have direct responsibility for modes of transportation other than just highways. Some of the ten have significant responsibilities for motor vehicles and other licensing and regulatory functions. Snow and ice are major problems for some. Others are more concerned about the effects of extreme heat. In some states, including Arizona and New Jersey, the state owns a relatively small percentage of the total highway miles in the state, and the DOT can focus on those major, high-volume roadways. In other states, including Virginia, the majority of all highways are state-owned; and the DOT must spread their attention and resources in different ways.

These differences raise some questions regarding Organizational Performance. For instance, do these differences among the state DOTs help explain differences in organizational performance? Are the lessons learned in a state where the CEO reports to a board applicable in a state where the CEO reports directly to the Governor? Should DOTs look only at peer states in deciding how to measure performance?

The answers are, yes and no. Each of the ten states visited as part of this project developed their own approach to organizational performance in response to their unique needs and circumstances. None of the ten adopted an off-the-shelf package, and most have avoided labels that would cause their employees or other stakeholders to perceive a “flavor-of-the-month” approach to organizational improvement.

On the other hand, **nothing in this research, in the survey of all 50 states, or in the visits to the ten states pointed to any correlation between organizational success and the fundamental differences in state DOT responsibilities, organizational structures, climate, or the size or makeup of the state’s transportation infrastructure. The findings and recommendations offered in this report are believed to be applicable to every DOT.**

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### Arizona

*Profile:* The Arizona Department of Transportation (ADOT) has responsibilities for all modes of transportation, but most of ADOT’s 4,650 employees work in two divisions—Intermodal Transportation and the Motor Vehicle Division. For the highway program, the department has ten District offices. The Motor Vehicle Division has 60 field offices staffed by ADOT employees, and numerous other locations staffed by “third-party” service providers. The department is responsible for almost 6,800 miles of state highways. The administration of

ADOT is the responsibility of the Director. The seven-member State Transportation Board, appointed by the Governor, serves in an advisory capacity to the director and has certain policy-level powers, including the designation of state highways and approval of construction contracts.

*History of Organizational Improvement Programs:* ADOT's investment in quality management programs began with a TQM initiative in the early 1990s, and the department was the first public agency in Arizona to pursue awards based on the Baldrige criteria, through the Arizona Quality Alliance (AQA). Most of the current programs and practices that are viewed by ADOT managers as making significant contributions to current organizational performance are attributed to leadership, enhancements, and ongoing support from a succession of Directors, beginning in the early 90's.

*Mission:* "To provide products and services for a safe, efficient, cost-effective transportation system that links Arizona to the global economy, promotes economic prosperity and demonstrates respect for Arizona's environment and quality of life."

## **Florida**

*Profile:* The Florida Department of Transportation's (FDOT) responsibilities include airports (800 aviation facilities), seaports (14), rail (2707 railway miles) and highways (41,000 lane miles). It is decentralized in accordance with legislative mandates, has seven Districts and Florida's Turnpike Enterprise. There are 7,450 employees.

*History of Organizational Improvement Programs:* FDOT's journey into organizational effectiveness (they call it Performance Management) began in the 80's following a QualTech Conference about quality management. This evolved over the years through Quality Circles, Quality Improvement Programs and became driven by Baldrige criteria in 1997. In 1998 they adopted the Sterling criteria (modeled after the Baldrige criteria) as a framework for organizational effectiveness. In 1998 they built their Business Model on this framework. Their current business plan comes from the Model and includes eleven key focus areas.

*Mission:* "The Department will provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity and preserves the quality of our environment and communities."

## **Illinois**

*Profile:* The Illinois Department of Transportation has the responsibility for highways, bridges, airports, public transit, rail freight, and rail passenger systems. They have 16,161 miles of state highways and 7,506 state bridges. The department has 5800 employees.

*History of Organizational Improvement Programs:* IDOT began strategic planning in 1999 and the use of the ISO 9001:2000 standards for improving processes in their highway design division in 2003. They received ISO 9001:2000 certification in June 2005 for the Design and Planning areas of the Division of Highways and are working toward certification for the entire Division of Highways, including the nine regional districts.

*Mission:* "Provide safe, cost-effective transportation for Illinois in ways that enhance quality of life, promote economic prosperity, and demonstrate respect for our environment."

## **Maryland**

*Profile:* The Maryland State Highway Administration is one of seven modal agencies under the MD DOT. It is comprised of 7 Districts and 28 maintenance shops and employs 3400 people. It maintains more than 16,000 lane miles of interstate, primary and secondary roads (68% of the total vehicle miles of travel) and more than 2500 bridges.

*History of Organizational Improvement Programs:* "Managing for Results" is State mandated; however, it is not required to use it as a management tool the way MDSHA does. Quality initiatives started in the mid 80's with Quality Circles, which basically put the infrastructure in place. Several years ago they started Business Planning because it made good business sense. Their focus is on "Performance Excellence" and "excellence in all that we do."

*Mission:* "Efficiently provide mobility for our customers through a safe, well-maintained and attractive highway system that enhances Maryland's communities, economy and environment."

## **Missouri**

*Profile:* The Missouri Department of Transportation (MoDOT) has responsibilities for highways (more than 32,000 miles), aviation, waterways, transit and railroads. The department is decentralized, with headquarters in Jefferson City, and ten District offices. MoDOT has approximately 6,500 employees. The six-member Missouri Highways and Transportation Commission governs the department. Commission members are appointed by the governor and are confirmed by the Missouri Senate. The commission appoints MoDOT's director and secretary to the commission. The director is responsible for all other employee appointments and for administration of the department.

*History of Organizational Improvement Programs:* MoDOT refocused its approach to organizational performance in 2004 when a new director took office. At that time MoDOT was recovering from a loss of public confidence revolving around budget overruns, construction delays, and unfulfilled promises. MoDOT is successfully addressing those concerns and expanding their foundation for ongoing organizational improvements.

*Mission:* "Provide a world-class transportation experience that delights our customers and promotes a prosperous Missouri."

## **New Jersey**

*Profile:* The New Jersey Department of Transportation is responsible for maintaining 2,313 miles of state highways and 2,356 state bridges. The department has 3600 employees.

*History of Organizational Improvement Programs:* The New Jersey Department of Transportation completed a full Baldrige assessment in 2004. Two divisions repeated the self assessment in the fall of 2006.

*Mission:* "Improving Lives by Improving Transportation."

## **New Mexico**

*Profile:* New Mexico is the 5<sup>th</sup> largest state in the country with 29,456 lane miles of State and Interstate highways. NMDOT employs over 2600 people in six state districts and the headquarters, or General Office. It is responsible for highways, transit, rail and aviation. State law provides that the NM Transportation Commission, made up of six Commissioners, one from each District, shall set policy for the Department of Transportation, however, the day-to-day operations and management of the agency is left to the department's cabinet secretary.

*History of Organizational Improvement Programs:* NMDOT has a long history of quality and performance improvement. It began in 1994 with the development of Compass, which was a compilation of over 80 significant performance measures and established a culture for measuring performance. In 2002 they applied for and won the Quality New Mexico Zia Award (based on the Baldrige categories).

*Mission:* New Mexico DOT uses their guiding principles to focus their mission, i.e. commitment to safe and secure multimodal transportation, partnership with tribal and local governments, environmental responsibility and efficient use of public resources, and supporting the economic vitality of New Mexico and the Nation.

## **North Dakota**

*Profile:* The North Dakota DOT has 1044 full time employees responsible for 7,381 miles of state highways and 1,106 state bridges. They maintain more lane miles of road per maintenance employee than any other state and have the second smallest transportation workforce in all of the state DOTs. They have more miles of road per capita; and, there are more registered vehicles than there are residents. Included in the DOT are Aviation Services and the Division of Motor Vehicles.

*History of Organizational Improvement Programs:* NDDOT started their current approach to organizational effectiveness in 2002 using a balanced scorecard approach and began using the book "Soaring with the Phoenix" as their Strategic Planning model, which they tailored to meet their needs.

*Mission:* "Providing a transportation system that safely moves people and goods."

## **Ohio**

*Profile:* The Ohio Department of Transportation is comprised of 12 Districts and employs 5800 people. It is the 7<sup>th</sup> largest highway system in the nation, with the fifth highest volume of traffic. It has the second largest bridge inventory in the nation.

*History of Organizational Improvement Programs:* ODOT started its quality initiative in 1992 and started establishing measures two years later. They have achieved Baldrige Tier 2 and several districts have been awarded Tier 4 recognition. In 1997 they began reengineering efforts and using "Good to Great" model to improve services to customers.

*Mission:* "We will provide a world class transportation system that links Ohio to a global economy while preserving the state's unique character and enhancing its quality of life."

## Virginia

*Profile:* The Virginia Department of Transportation (VDOT), with approximately 9,300 employees, is responsible for 57,000 miles of state highways, the third largest state highway system in the country. VDOT, with nine District offices, is the largest of six agencies that make up the Secretariat of Transportation. The 17-member Commonwealth Transportation Board (CTB), appointed by the Governor, establishes the administrative policies for Virginia's transportation system, allocates highway funding to specific projects, locates routes, and provides funding for airports, seaports and public transportation.

*History of Organizational Improvement Programs:* Most of the programs and practices cited by VDOT managers as making significant contributions to current organizational performance were initiated or gained traction in the years 2000 to present. VDOT had experienced several years of increasing criticism for cost overruns, project delays, budget problems, and a perception of general mismanagement.

*Mission:* “VDOT will plan, develop, deliver and maintain – on time and on budget- the best possible transportation system for the traveling public.”