



Annex to

TRANSPORTATION RESEARCH
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**Strategic Management Research Needs
For State Departments of Transportation**

Summaries of State DOT Experience

TRANSPORTATION RESEARCH BOARD / NATIONAL RESEARCH COUNCIL

This document is an Annex to Circular 501, *Strategic Management Research Needs for State Departments of Transportation*. The Annex contains unedited summaries of State DOT initiatives, prepared as advance material for the "CEO Workshop of Managing Change in State Departments of Transportation," held in Minneapolis on June 25 – 27, 2000. The summaries relate to the three themes of the workshop:

- Strategic Planning
- Workforce and Reorganization
- Program Delivery

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**CALIFORNIA
CAO WORKSHOP, "MANAGING CHANGE IN STATE DEPARTMENTS OF
TRANSPORTATION"**

Session: Strategic Planning – California Department of Transportation: The requested information for the following areas are Caltrans-specific and have been obtained from the information developed from the Departmental executive staff during the current strategic planning process

Key Challenges (major obstacles you have faced in undertaking these initiatives)

The critical organizational issues specific for Caltrans over the next five years are listed below:

- Simplify and streamline processes to focus on customer outcomes
- Enhance workforce quality
- Improve communication
- Maintain and optimize transportation system
- Develop Management Information Systems (MIS)
- Demonstrate transportation leadership

Activities (steps you have taken for these initiatives and results to date)

Since early fall of 1999, the Caltrans executive team has been engaged in two concurrent efforts designed to give employees a clear vision of the Department's present and future direction. The Strategic Planning Steering Committee (SPSC), composed of the Chief Deputy Directors, Deputy Directors and three District Directors, has met regularly since October to define a strategic planning road map for the organization. This road map received the concurrence of all Caltrans' top management when it was presented at the Executive Planning Meeting in Culver City January 25 & 26, 2000.

What is unique about this current round of strategic planning is the degree of ownership held for it by the team. Rather than turn the process over to staff members, the SPSC is carefully crafting each step of the Department's direction, roll-out and ultimate evaluation of success.

Guiding the Strategic Planning Steering Committee is employee input from the 1999 Caltrans Employee Survey. This effort, overseen by the Employee Survey Steering Committee was comprised by a survey of employees followed by 30 employee focus groups. The survey was used to identify areas of departmental strengths and weaknesses from the employees' perspective. Employees sent a strong message to the executives that a clear sense of direction for the Department is missing. This information was key in the development of the departmental mission, vision, goals and principles.

The department is currently working in the objectives and performance measure step of the roadmap.

Lessons Learned (what has worked and what has not)

Based on an internal assessment of the current strategic planning process, it was determined that there were some very key lessons learned. The SPSC took several of these and actually adjusted their approach using this feedback in adopting the currently approach.

The need to:

- Adopt a simple, synchronized, and stable strategic planning process that includes both top-down and bottom-up involvement and focuses on alignment and accountability.
- Gain true consensus on the "core program business model" (break down of model at the operational level).

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- Define strategic planning staff's role, then assess skills/styles needed and invest in training/coaching they need to fulfill it. If we don't want to rely on a consultant then we need to invest in training.
- Better coordinate the strategic planning and budget cycles.
- Be consistent and clear on performance measures. Performance measures are evolving.
- Involve and communication to all levels of employees using multiple channels.
- Improve the teamwork at executive management level and senior management level.

Research Needs (most important items that would be useful to have research on)

- Information on the current industry trends in this area.
- Information on industry trends in the transportation area.
- Networking of other transportation organizations to share lessons learned.

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Session: **Workforce & Reorganization Driven Initiatives**

Key Challenges (major obstacles you have faced in undertaking these initiatives)

The growth of California's economy over the last several years has made billions of additional dollars available for transportation, and thus the need for several thousand additional Capital Outlay Support (COS) staff. In addition, the advanced age of Caltrans' workforce and an enhanced retirement package allowing for earlier retirement opportunities has increased attrition. Hiring associated with these two factors has led to a situation in which 60% of the COS workforce has less than three years of experience.

The key challenges associated with the increase in size, and the lack of experience of the workforce, include:

- Recruiting and hiring the large number of staff, particularly in urban areas
- Finding and making improvements to facilities to house the staff
- Providing training to improve productivity
- Changing/modifying legacy systems and business practices to improve efficiency

Activities (steps you have taken for these initiatives and results to date)

Recruiting and hiring the large number of staff

Until recently, recruitment was limited to within California (One exception is Caltrans' Internet exam – an on-line written test from which applicants with passing scores are placed on hiring lists.) Districts statewide (12 total), plus Headquarters and the Engineering Service Center have all done recruiting as necessary to staff their respective workload. In addition, Hiring Centers were established in major metropolitan areas to assist the districts in hiring the needed staff. Personnel and other administrative support staff have been dedicated to the hiring effort. In the last month, teams of recruiters have traveled across the U.S. to reach out-of-state graduates. It is anticipated that COS will be staffed-up to the authorized 1999/2000 fiscal year (FY) level by June 30, 2000.

Finding and making improvements to facilities to house the staff

Space for staff within existing facilities has been maximized through the utilization of modular furniture, and the elimination of some storage, conference and quiet rooms. Lease-able space has been identified in most location where the need exists, and the process is underway to procure the space. Per State policy, Caltrans must rely on the Department of General Service (DGS) to procure the space. DGS is not staffed to handle Caltrans' need quicker than 6-9 months, with processing time potentially expanding this to 18 months.

Providing training to improve productivity

A focused training evaluation (FTE) has been performed to identify the training requirements of individual staff performing specific COS duties. The FTE process used managers' and supervisors' assessment of job requirements to develop a questionnaire that was administered to all Senior Transportation Engineers in COS. The results identified a listing of job-specific skills deficiencies, by individual. From that, a three-year training plan was developed to identify the major areas of need, and the priority of those needs. The dollars and staff needed to develop and perform the training have been included in Caltrans budget request for the 2000/2001 FY.

Lessons Learned (what has worked and what has not)

What Has Worked Well

The use of Hiring Centers has been extremely successful. The marketing of the Center ensured that large numbers of applicants turned out. Having interview panels (to determine qualifications), physicians (to perform required physicals), administrative staff from Recruitment and Personnel (to process paperwork), etc., all in the same location allowed for an assembly line-type process.

The use of modular furniture has made efficient use of the existing space, and enabled Caltrans to accommodate the new hires, to date. Modular furniture will be used as new facilities come on-line as a way to minimize space requirements.

The focused training evaluation has been invaluable in determining and prioritizing training needs. The up-front effort to plan the training justified the need and amount of training in the budgetary request.

Standardizing computers and software have aided in communication and enabled work to be processed more efficiently.

What Has Not Worked Well

Because of the timing of the budgetary process, decisions on staffing levels do not become firm until April or May each year. As a result, by the time recruiting efforts begin in earnest most spring graduates have already made job commitments to other firms. Many of these are also the higher quality candidates. This leaves a much smaller candidate pool from which to select new staff. This situation was compounded in the out-of-state recruitment efforts, as there were instances wherein graduation had occurred by the time the recruitment teams reached the university, leaving no one to be interviewed.

Obtaining additional leased space has been cumbersome and time-consuming process. Again, with decisions on staffing levels not becoming firm until April or May, and with a 6-9 month process before space can be occupied, staff needed on July 1st cannot be brought on-board until halfway through the fiscal year. The by-product of this is a slippage of project schedule and an untimely use of available funds.

Other

Until measurement of the effectiveness of the training made, the success of the focused training evaluation and the resultant three-year training plan will not be known. However, the approach has given the COS Program credibility in its budgetary request and allowed for the reinstatement of training funds which for years have been cut from the budget.

Research Needs (most important items that would be useful to have research on)

- Regionalization/geographic consolidation versus multiple, independent districts related to the performance of project development services
- Skills development of a large, inexperienced workforce

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CALIFORNIA DEPARTMENT OF TRANSPORTATION

Session: Process and Program Delivery

Key goals of improving project development processes and project delivery:

- Better define scope, cost and schedule to minimize project change after programming.
- Streamline/improve environmental and project approval process.
- Streamline/improve project design and right of way acquisition processes.
- More efficient administration of construction contracts and improved quality of products delivered to the traveling public.

Key Challenges (major obstacles you have faced in undertaking these initiatives)

- Identifying meaningful performance measures for efficiency, timeliness and product/service quality, including establishing baseline measures and achievable targets.
- Converting and consolidating multiple large databases into web-enabled data warehouses for electronic business. Also requires standardization of business processes throughout the department.
- Inculcating new or revised procedures into long established project development process.
- Maintaining high level of productivity while continuously improving the process.
- Developing "shared visions" with our partners in industry, and local, regional, state and federal agencies.
- Increasing ownership and maintaining statewide consistency of decisions made as a result of increased delegations.
- Maintaining acceptable traffic flow through construction projects in urban areas.
- Avoiding premature budget cuts as a result of a successful process improvement pilot.

Activities (steps you have taken for these initiatives and results to date)

- Better define scope, cost and schedule to minimize project change after programming.
 - Employ corridor management techniques to provide coordinated project development strategies.
 - Identified critical activities to be performed earlier in the project development process.
 - Advancing the programming of project development support funds to allow for more detailed preliminary studies prior to programming capital funds for long lead-time projects.
 - Developed an expedited project initiation document to allow the advanced programming of support funding above.
- Streamline/improve environmental and project approval processes.
 - Developed a streamlined Negative Declaration document format for California Environmental Quality Act (CEQA) compliance.
 - Developed an improved partnership with US Environmental Protection Agency and Federal Highway Administration to improve project development and permitting activities
 - Developed agreements with various U.S. and State regulatory agencies to deliver timely review and coordination services.
 - Established additional staff/liaisons with reviewing agencies to facilitate the review processes.
- Streamline/improve project design and right of way acquisition processes.
 - Pilot a process where multifunctional work teams would be responsible for delivering a performance based highway preservation plan.
 - Implemented "Cycle Time Reduction" teams to simplify the Plans, Specifications and Estimate packages developed for simpler, more routine projects.
 - Accelerate right of way acquisition by allowing acquisition prior to environmental clearance on certain projects.
 - Obtained a waiver from FHWA from the requirement to perform full appraisals for parcels having an estimated value of \$10,000 or less.
 - Created Right of Way Project Delivery Teams where individual team members can perform multiple functions, resulting in no handoffs from function to function.
 - Increased delegations from Headquarters to districts in numerous aspects of right of way and utility processes.

- More efficient administration of construction contracts and improved quality of products delivered to the traveling public.
 - Began implementation of a "Design Sequencing" pilot. Design-sequencing is a method of contracting that enables the sequencing of design activities to permit each construction phase to commence when design for that phase is complete, instead of requiring design for the entire project to be completed before the commencing construction. More efficient administration of construction contracts and improved quality of products delivered to the traveling public.
 - Implemented constructability reviews of project plans and specifications by construction engineers during the design phase.
 - Established Industry/Caltrans Team that developed performance measures and a partnering guide.
 - Piloted an "e-business" system for paying certain contract billings.
 - Developed a "Time Related Overhead" bid item and drafted guidelines and specifications for "Cost-plus time" bidding to minimize the need for dispute resolution.
 - Streamlined the approval process for "Cost Reduction Incentive Proposals" and included the requirement for a Value Engineering session with the contractor on certain contracts.
 - Implemented a new generation of Quality Control/Quality Assurance specifications for paving.
 - Piloting One-Year Warranties of specific types of pavement surfacing.

Lessons Learned (what has worked and what has not)

- Tendency to identify outputs not outcomes as performance measures, resulting in the measurement of "how much" as opposed to "how well".
- Difficulty in validating and verifying data before converting databases.
- Not recognizing the costs of system administration for conducting e-business.
- Meaningful performance measures must be developed and tracked for any new or revised processes to encourage implementation.
- Establish a clear goal and vision before embarking on a change process.
- Involved all stakeholders, including local entities and industry, in the change process to increase ownership and avoid future barriers.

Research Needs (most important items that would be useful to have research on)

- Development and use of Performance Measures in various states.
- Project cost estimating procedures.
- Effectiveness of project environmental mitigation features.
- Highway impacts on species habitat
- Development and implementation of e-business in various states.
- Organizational structures providing efficient delivery for public agencies.
- Piloting a "master services contract" concept where construction contracts are let for a region or corridor rather than a specific project location.
- Effectiveness of A+B (item plus time) contracting.
- Storm water quality "best management practices".
- Longer life asphalt concrete pavement designs and preliminary results.
- GIS applications in highway design, including right of way, environmental, and hydrology.
- Piloting industry collaboration in project specific designs (e.g. pavement industry).

CAO SESSION I: STRATEGIC PLANNING-DRIVEN INITIATIVES

May 23, 2000

Priority Setting Process:

- Definition of Department Mission - The Colorado Department of Transportation's Mission was reviewed by the Transportation Commission in 1997 and revised to strengthen the focus on serving transportation customers through a multi-modal system moving people, goods, services, and information.
- Transportation Investment Strategy - Colorado's 20 Year Transportation Plan, adopted in January 1996 recommended the development of a transportation investment strategy (TIS) to guide resource allocation. The TIS framework includes three levels: 1) investment level; 2) program level; and, 3) operational level. The five investment categories approved by the Transportation Commission are:
 - System Quality - Programs that maintain the existing infrastructure
 - Safety - Programs that reduce fatalities, injuries, and property damage
 - Mobility - Programs that provide for the movement of people and goods
 - Program Delivery - Support functions that enable the delivery of CDOT's programs
 - Strategic Projects - 28 high priority statewide projects

Each of the investment categories has specific goals to be achieved through the systematic allocation of resources. Results of investment decisions/resource expenditures are tracked through performance measurement at the investment, program, and operational levels.

- Strategic Transportation Investment Program - The Transportation Commission selected 28 high priority, high cost projects for acceleration through targeted investment. Initially, the Commission programmed \$100 million of its resources per year, plus \$25 million for preliminary engineering work, for this program. In 1999, Colorado voters approved the sale of transportation anticipation notes (TRANS) to accelerate the completion of the 28 strategic projects. Under this scenario of advanced revenues from bonds to be paid off with future federal funds, the Transportation Commission opted to adjust its commitment to the Strategic Projects to \$75 million per year, and increase its allocation to other priority programs.
- Definition of Department wide objectives - The Transportation Investment Strategy framework is being further developed by identifying Department-wide Objectives which are linked to each investment category. These objectives will provide critical direction to program managers to develop strategies aimed at achieving the desired results from our investments.

Performance Measurement

- Linking Performance Measures to the Transportation Investment Strategy – In 1998, the Department began the process of selecting pilot performance measures associated with the investment categories and their associated program and operational levels. Five key measurement areas are defined:
 - Productivity
 - Timeliness
 - Results
 - Customer Perception
 - Quality of Life.
- Establishing Baseline Conditions and Reporting Mechanism – The Transportation Commission directed staff to provide an annual report on the pilot performance measures assessing:
 - the effectiveness of the measures selected;
 - the quality and availability of the data associated with the measures; and,
 - to establish baseline and trend information to measure if conditions are getting better or worse.

At this initial stage, the Commission utilizes the limited performance measurement information only as input into its consideration of resource allocation options.
- Life-Cycle Orientation/Asset Management – CDOT has three well-developed management systems in place: 1) pavement; 2) bridge; and, 3) maintenance. The pavement management system has been undergoing refinement to incorporate life-cycle costing to enhance its utility in supplying decision makers with appropriate information. CDOT has also undertaken a research project to explore an asset management framework for the CDOT's management systems. The intent of asset management is to provide a more comprehensive estimate of maintenance, construction, and operational/management costs to protect the transportation infrastructure.
- Use of Customer Surveys – Since 1992, CDOT has commissioned a number of customer surveys, each providing insight on degree of customer satisfaction and expectations for services supplied by CDOT. Survey information is expected to be the primary source of customer-related performance measure information.

CAO Session II - Workforce and Reorganization-Driven Initiatives

Organization Reconfiguration

- Decentralization / Centralization -
 - Organization relates to function, with the core organizational functions being planning, construction, maintenance and administration/support.
 - Because of Colorado's size, decentralization of core services and functions has been the norm. While core administrative functions are centralized.
 - An exception to this was in the construction field where preliminary engineering and design functions were centralized. Over the past three years Colorado has decentralized these functions as well based upon geographical regions within the state. This transition provides additional staff to support the region it also provides a broader breadth of experience for the engineer. On a centralized basis the engineering staff was relegated to a single area of discipline. On a regional basis the engineering staff is able to experience and provide expertise on a broader range of disciplines.
- Project Focus -
 - Colorado has recognized a heightened need to provide the public with traveling and construction information. Of import is the need to continually update this information as reliability and confidence in the information provided is the number one public concern
 - Colorado has increased its web-based presence. Colorado has also recognized the need for timely, focused public relations efforts and has contracted with firms specifically for this function.
 - Project management is evolving particularly from the impact of advances in IT. Colorado is reviewing technologies that have emerged since January and will implement a construction pilot program in September / October.

Staffing

- Like other state governments Colorado is facing a wave of attrition due to retirements in the workforce.
- Colorado has also benefitted from economic growth and has enjoyed the benefit of a greatly expended construction program.
- Therefore, staffing and a reexamination of work process has allowed Colorado to move more senior staff to a project oversight / administrative role while utilizing staff with less seniority for daily operations. Meeting the increased demand in construction projects has been filled through the private sector.
- Recruitment / training / cross-utilization is a primary focus of Colorado

Process & Program Delivery Driven Initiatives

June, 2000

The following is an overview of the major programs implemented by the Colorado Department of Transportation, Office of the Chief Engineer in order to improve the effectiveness and efficiency of the organization to help accelerate the completion of CDOT's major construction projects. With the successful implementation of these programs CDOT will continue to realize a significant improvement in terms of its project delivery, program efficiencies and the implementation of new innovative practices.

Project Delivery

From FY 1993 to FY 1998 the amount of contracts awarded and the timing of these awards has been relatively constant. However, with the successful implementation of the Chief Engineer's Objectives and the re-engineering of the engineering organization, in the first six months of FY 1999, CDOT committed to contract nearly the same amount of construction dollars it encumbered in all of FY 1993, 1994, 1995 or 1996. Seventy-five percent of CDOT's construction budget was awarded and under contract in the first six months of FY 1999. In previous years this usually did not occur until the final quarter of the fiscal year.

By awarding projects earlier in the year, CDOT avoids some inflation in construction costs, improves its bids by increasing the competition among contractors who are not yet committed to summer construction projects and provides the awarded contractor with more planning time which results in significant savings in bid prices for CDOT. For FY 1999 this has resulted in the low bid averaging approximately 96% of the engineer's estimate which on an annual basis is lower than has been for the last 6 years. This has continued into FY 2000 where through the first 3 quarters of the fiscal year we are at an average of 93%.

Another efficiency that has been realized which has resulted in an accelerated delivery of our major construction projects is the amount of time it takes CDOT to deliver an approved consultant contract. Until FY 1999 the average time to get an approved consultant contract was approximately 30 weeks. Not only did these cause significant delays in getting the initial design work complete so the project construction could be started; it meant that the cost of the construction was higher due to increased inflationary costs. With the completion of re-engineering and the implementation of "one-stop shopping" process we have seen a reduction in the process time to approximately 11 weeks or a 63% reduction in processing time. In addition, this has been accomplished during a period where the amount of work done by consultants has increased from \$9.0 million in FY 1995 to \$91.0 million in FY 1999 (911% increase) and the number of contracts have increased from 74 to 626 (746% increase) with no additional FTEs allocated to our operations.

Program Efficiencies

In FY 1994 the total CDOT budget was \$246.5 million which increased to \$783.3 million in FY 1999, a 217% increase. Getting this increased program out has been accomplished with virtually no increase in FTEs (FY 1994 – 3,294 FTEs and FY 1999 – 3,297 FTEs). Instead, the Department has increased its use of the private sector. More specifically, nearly 50% Design program was privatized in FY 1999 and 80 percent of its entire budget has gone to the private sector, making CDOT the most privatized state agency.

This has been accomplished primarily through the re-engineering of the Chief Engineer's organization. Of the 3,297 FTEs within CDOT, 2,635 are under the management of the Chief Engineer of which 1,011 are related to the delivery of our construction program and 1,624 are allocated to our maintenance program.

In FY 1997, the Chief Engineer embarked on the task of re-engineering its entire organization. The first phase focused on the engineering side and the delivery of our construction program. We were able to significantly accelerate the construction process by employing Total Project Leadership (TPL) as part of our re-engineering efforts.

TPL is a team, consisting of a representative from each area of expertise required for project development and construction, involved with a project from cradle to grave. In other words, members from Planning, Right of Way, Environmental, Design and Construction are assigned to a particular project from its inception. This process greatly reduces the number of hand-offs leading to fewer errors, reduced costs and accelerated completion of the project.

The second phase of the Chief Engineer's re-engineering dealt with the Headquarter project support staff also known as the Staff Branches, which had approximately 326 FTEs prior to going through re-engineering. In FY 1998 the re-engineering of the Staff Branches was initiated. This effort has resulted in a significant reduction in upper and middle management (approximately 40%) and a revamping or the elimination of many outdated and time consuming processes.

Through these two efforts, over 50 FTEs, (43 from the Staff Branches alone), have been reallocated from support-oriented functions into project delivery positions in the field which has resulted in lower project costs and faster project delivery. This offers obvious benefits to the public, who benefit from traveling smoother, safer and less-congested highways with tax dollars being used more efficiently.

The third phase of the Chief Engineer's re-engineering deals with our Maintenance Program which currently is staffed with 1,624 employees.

Historically, CDOT's Maintenance Program budget has been increased for inflation each year and allocated to the 6 CDOT Regions based on estimates provided by the maintenance superintendents. Under the re-engineering effort, we established levels of service for each of the primary programs under maintenance, which will result in a more needs-based maintenance budget. Under this new performance based program, approximately 70 inspection criteria will be developed by which CDOT will conduct field surveys on a random-sample basis statewide. From these survey results, CDOT will rate the maintenance program in each region and section to identify the level of service, determine the cost necessary to improve the service and enhance the decision and budget making process. In addition, we will review how each maintenance patrol is currently structured and what an optimum structure would be such that the efficiency and effectiveness of the maintenance patrols will be maximized. This process will then allow CDOT to more appropriately transfer budget dollars and resources to maintenance programs where they are most needed which results in a better maintained transportation system for Colorado.

Each phase of the re-engineering effort is focused on constructing and maintaining a transportation system in the most cost effective and efficient manner. Towards this end one common thread in each phase is the considerations of customer satisfaction. In this area we have established the concept of "1-Stop Shopping". As noted earlier we have implemented Total Project Leadership, which has eliminated the hand-offs and the mistakes in the actual project design and construction.

In the Staff Branches, we have reorganized such that all activities that deal with project development such as ROW and environment and contracts are under one Branch such that the Regions will experience "One-Stop Shopping" as they work through their projects. In each of the Regions we have established a Traffic Operations section such that the public has one contact when dealing with issues such as safety, signing, pavement markings, traffic signals etc. In the Maintenance program we have centralized the oversize/overweight permitting program which has allowed us to provide significantly improved services including extended hours of operation and 7 day a week service which has extreme benefits to the trucking industry.

With the completion of each of these efforts, there remains 2 phases to be completed. The first involves the identification of the "key business functions" within the Department. This will include the development of performance measures for each of these key business functions and the identification of the necessary resources and staffing required to maintain these key functions. The second deals with the development and implementation of a "Succession" plan for each our employees within the Department.

Innovative Procedures

In addition to the improvements in project delivery and the implementation of various program efficiencies, CDOT is currently implementing several innovative procedures which will optimize the utilization of the taxpayer's transportation dollar. These innovative procedures include: 1) Warranty Projects; 2) Design-Build Construction; and 3) Project Incentive Program.

Project Warranty Program

Project warranties are a means to improve project quality by shifting more responsibility to the contractor. It is up to the contractor to deliver and guarantee a quality product up front, reducing future maintenance costs. The ultimate benefit of the warranty program for the traveling public and taxpayers is the delivery of quality projects that will not require significant maintenance by CDOT over a five- or 10-year period.

As a result of SB 97-128, CDOT worked cooperatively with the Federal Highway Administration and the construction industry to establish a pilot program that requires contractors to warranty their work. For the 1998 pilot program, three asphalt-paving projects were selected to carry a warranty requiring the contractor to guarantee the quality of their work and materials for three years, including the necessary repairs or maintenance. The three projects for this pilot program include:

1. C-470 south of Denver from Santa Fe Drive west for 3.1 miles (\$1.6 million)
2. US 36 near Superior, 4.5 miles (\$1.7 million)
3. I-25 south from Fountain, 4 miles (\$2.8 million)

At the end of the warranty period CDOT will evaluate their pavement rating and cost benefit and present their findings to the state Legislature.

For the 1999 construction season, CDOT is extending the pilot program to apply to additional projects, including a rehabilitation of SH 14 west of Ault for 5.5 miles and west of Briggsdale for 10 miles.

Design-Build Construction

On a traditional highway project, a design team prepares all of the construction plans before contractors bid on the work. With design-build, the plans and the construction are under one contract and both processes can take place concurrently. The contractor does not need to fully complete the plans prior to starting construction.

For example, decisions on elements such as lighting and landscaping can easily be made at a later date, after work on the project has begun. Experiences in other states have shown that design-build can reduce construction time by as much as 40 percent.

To date CDOT has the following Design-Build Projects:

1. I-70 - Airport Road east for 12 miles (\$20.6 million)
2. I-70 - West of the Agate interchange east - 11.4 miles (\$25.9 million)
3. US 287 - Lamar south for 8 miles (\$9.2 million)
4. I-25 - Wyoming state line south for 17 miles (\$26.3 million)
5. I-225/I-70 - Northwest flyover reconstruction, fourth phase of five (\$4.6 million)

In many states, design-build teams are chosen on a dual basis of technical merit and cost, rather than simply lowest bid. This so-called "Best Value Offer" encourages innovation and allows contractors to optimize their work forces, equipment and schedules. House Bill 99-1324, passed by the state Legislature, allows CDOT to use this approach. It will be this approach that is utilized on our largest Design-Build project which is the

I-25 Southeast corridor through Denver which will have a cost of approximately \$1.4 billion. Utilizing the design-build process and the opportunities afforded by bonding, this project will be completed by FY 2007, many years ahead of its completion under normal funding and design/construction procedures.

Incentive Program

CDOT is increasing its use of cash bonuses to reward contractors who complete construction in high-traffic areas quickly. In the past, CDOT has offered incentive payments on only three to four projects a year statewide out of approximately 120. This program has been so successful that CDOT is now offering bonuses with greater frequency.

Cash incentives give contractors a reason to accelerate the completion of a project, either by working at night or more efficiently during the day. (CDOT does place some restrictions on when contractors can disrupt traffic.) The traveling public and surrounding communities benefit from a shorter construction period. Contractors are further encouraged to speed up construction by being faced with a late-completion disincentive, which is assessed on a daily basis if a contractor fails to meet a certain deadline.

DELAWARE

Strategic Planning: Delaware Department of Transportation Perspectives

Experience: Formally began Strategic Planning starting with FY 1997 (July 1996) and incorporated first efforts at formalized objective-making and performance measurement in FY 1997 within the budgets that were generated.

Governor – through State Budget Office – mandated Strategic Plan development for each state agency in FY 1999, using three-year time horizons and standard formats.

Updates to the Strategic Plan have been made annually since 1996 as the front end of the annual budget – both capital and operating – cycles

Changes to the process have been freely made by senior management to improve and institutionalize

Key Challenges: *Buy-in* ... everyone has a role, but there is no sure-fire recipe for eliciting the participation and sincere support of the people who need to make the system work ... from top to bottom

Try not going overboard ... by limiting Strategic Goals and Objectives to a few, high level important initiatives that could make a real difference if they are actually accomplished ... resist the But-Everything-We-Do-Is-Important! impulse to include as many things as possible in the inventory of Department Goals, Objectives, and Performance Measures or set the stage for a nightmare of results reporting

Keeping your eye on the ball ... by focusing on measuring performance (outcomes) instead of activities (process) ... ex: At the Department level, we initiate projects (process) in order to improve the infrastructure (outcome) ... by avoiding vagueness in goal-setting ... ex: "Supporting the State Long-Range Plan", "Improving Land Use Planning", or "Ensuring Efficiency in Transportation Investments" are laudable sentiments, but are impervious to either objective definition or measurement

Reporting results ... the feedback loop that tells you if what you are doing is having the intended effect ... accountability (the "A" word) can represent a threat if the reason for wanting results to be reported are suspected to be punitive ... but without effective reporting the whole process is valueless

Activities

Buy-in initiatives

- challenging middle managers and division directors to develop bottom-up divisional plans ... establishing grass roots ownership
- Department-wide (off campus) meetings of senior and key middle managers to review, revise, and critique divisional and departmental goals, objectives
- Internal Communications seminars/initiatives
- Senior Management retreats
- Quarterly division director progress report sessions with middle management
- requiring division directors to focus all budget hearings – both Governor and legislative – on the performance measure impacts that will occur if we receive the resources being requested

Not Going Overboard

- just three overarching goals for the Department's Long-Range Plan.. though one turned out – after looking into it --- to be unsusceptible to measurement

- winnowing down divisional inventories of objectives, performance measurements to limited number of goals, objectives, performance measures
- simply challenging directors to keep their divisions focused by limiting goals, and objectives to a few (10-12) versus many (currently 3 - 21 per division)
- requiring reporting plans for each and every proposed objective and performance measure submitted for approval ... examining how and when something is measured can have a leavening effect on the But-Everything-We-Do-Is-Important!! impulse

Keeping your eye on the ball

- rejecting goals, objectives that lack definition or measurability
- performance measurement is an integral part of leadership ... not a chore to be delegated to staff ... when it's time to focus on the big picture, it's time for the agency executive and key senior managers to fill in the blanks

Reporting Results and the "A" word (Accountability)

- semi-annual one-on-one meetings between Secretary and divisional directors to create accountability for plans and performance
- inclusion of relevant Strategic Objectives in every fiscal document produced by Department ... including Budget Requests, CIPs, Work Programs
- incorporating divisional and departmental performance in personnel evaluations

Lessons Learned

Have a clear game plan... and improve it from year to year

- establishing an annual strategic planning routine is self-enforcing of good management habits
- make expectations clear up and down the line from the start
- set guidelines for establishing goals, objectives, performance measures ... and stick to them
- work to deadlines ... but make them realistic ... ***and keep them!***
- if Strategic Planning is among the most important tasks of senior leadership then the time it requires should be set aside ... should Strategic Planning meetings and deadlines are the first to be rescheduled and extended, it doesn't take long for the organization to figure out that it's really not very important to leadership

Training can help

- many in government have (still) not been exposed to outcomes and accountability ... it's alien ... so don't expect overnight results
- help folks focus on what you are trying to accomplish (outcomes) ... not how it's going to be done (process) ... government is all about process, effective organizations are about outcomes

Accountability

- a feedback system provides the energy to make the process work and reinvigorate it as each cycle begins anew ... without a real performance reporting system, buy-in and management interest wanes quickly
- a few big picture performance measurements – well reported – become self-reinforcing ... ex: most, if not all of, the Department's Preconstruction division personnel know what the construction advertising rate is every month throughout the year and focus their efforts as a team to reach the (90%) goal that has been set
- melding individual performance evaluations to divisional performance goals can work wonders in instilling buy-in

Workforce & Reorganization-Driven Initiative Delaware Department of Transportation

Secretary Anne P. Canby

Preface:

I appreciate this opportunity to share experiences with our peers throughout the nation as we work to address the challenges of providing comprehensive, top-quality transportation services in this dynamic industry.

We in the Delaware Department of Transportation have experienced comprehensive changes over the past six years in our mission, responsibilities and organizational structure. We have responded positively to increasing demands on our transportation network and to a public demanding mobility balanced with a good quality of life. We've addressed sweeping changes in federal policy regarding transportation improvement planning and implementation

Background:

DelDOT had historically been regarded as a "Highway Department". We have refocused as a multi-modal organization, charged to develop the optimum solution to Delaware's transportation needs considering and incorporating measures that best meet the needs of the citizens of our state with regard to quality of life, cost and responsiveness of approach.

In 1998, we undertook an Operations Review to assess and identify improvements in our business and management processes and capabilities. We strengthened our strategic planning process with increased use of performance measures and capacity analysis tools. We've systematically upgraded financial policies and work processes and we're striving to improve communications with our stakeholders.

As a follow-up to that review, we engaged in a Staffing Study in 1999 to assess the capacity of the Department to meet its responsibilities. Staffing levels and resource deployment were explored in this review. Staff skills were identified and assessed. The resulting conclusion was that staffing levels were indeed too low to meet present and future demands. An increase of 100 positions was recommended and redeployment of personnel and outsourcing of work was recommended in some areas.

Key Challenges, Activities:

The past two years in particular have been a time of sweeping change for DelDOT. One of the key issues was overcoming concerns and apprehension of our staff. Our research had indicated that communication within the department in general was lacking which served to compound our task. We continuously employed change management techniques including full staff participation in identification of needs and resource capabilities as well as constant, consistent, appropriate communication throughout the process. We needed to ensure that the entire organization had an opportunity for input and to have that input considered and addressed. Individual interviews, surveys and focus groups were employed to meet that need. In that process, we learned a great deal about our organization, the strengths and needs of our workforce, and areas for development. Attention to continuous consistent communication and feedback minimized over-expectations and rumor.

We found that we were well below industry staffing ratios in highway and equipment maintenance. Moreover, we experienced great difficulty recruiting and retaining equipment operators and mechanics in the northern part of the state. Our salaries simply weren't competitive in that job market. We've requested a review by the agency responsible for regulating state government salaries and that review will be completed during the coming fiscal year. Meanwhile, we've employed strategies to grow our own workforce through a creative employment and training agreement with a temporary employment agency whereby workers transition from the agency to DelDOT jobs upon completion of training.

Our construction projects had increased by 30 percent over the past few years and we have further increased workloads by implementing needed new programs to address stakeholder needs for quality of life and environment. Our project development and pre-construction functions were understaffed to meet current and future obligations. We faced a critical shortage of civil engineers fed in part by the alarming decline in enrollment at the college level and by inadequate salary structures. After an aggressive recruitment campaign, we were unable to fill a single vacancy in our primary recruitment classes. We've begun outreach programs to generate interest in transportation careers at an early level through partnership with area schools. We encourage and support the involvement of our engineers in working with the young people of our state in career days, science fairs and in the classroom to foster interest in transportation. This year we're introducing the TRAC program to schools throughout the state. On the salary front, we were able to get the attention and support of the state's salary administrators to develop a competitive pay range for our engineers. We're exploring opportunities for a pay for performance program, although the current state compensation program does not currently contain that component. We're in process of expanding our career ladder for engineers and developing incentive programs to aid retention and recruitment. While we haven't been able to fill all vacancies, we've made significant gains in hiring and retention, and we've laid the groundwork to address future staffing needs through our outreach efforts.

Lessons Learned:

The above are but a representative few of the areas of change and challenges faced. We've learned many lessons along the way. Perhaps the greatest lesson of all is that effective communication is key. We must communicate with our external and internal stakeholders to assure that their needs are heard and to establish a comfort level that those needs are given serious consideration. Good communication does not just happen. It takes real work and a conscious, unceasing effort. Without it, the goals prompting the change are seriously undermined.

Going forward, we've addressed our long-standing internal communications issue by employing communications measures used to good effect in our change experience. We've also incorporated a communications expert into our environment to address ongoing communications needs throughout the organization.

It is possible to achieve positive change, even in an organization that has seen little change for decades as DelDOT's experience illustrates. It is essential to keep the focus on the organization's mission, to thoughtfully and systematically institute changes that are necessary in light of that mission, and to ensure that all affected have an opportunity for input. There must be a follow-up and response to that input.

Conclusion:

In summary, our change experience in DelDOT has been positive overall. We were at a cross roads: we simply could not meet increasing demands with existing resources and methods of doing business. Getting our arms around this issue and devising and deploying a effective strategy was a huge but necessary undertaking. Is the process complete? As we move forward, our stakeholders' needs will continue to evolve, our assets will age, environment and needs will change and we must continue to be ready to rise to the challenge.

DELAWARE

PROCESS & PROGRAM DELIVERY

1. Major Capital Initiatives - Early in the 1990s Delaware DOT faced a number of major capital initiatives, which required a fast track approach to project delivery. The projects were large undertakings requiring multiple design and construction contracts. The project timing was generally dictated by outside forces and the projects were generally economic development initiatives, urban renewal projects, toll facilities or the reconstruction of vital links of the highway system. To accomplish these projects and allow many activities to run concurrently, the Department established a Project Management Team reporting to the Chief Engineer.

The Project Management Team consisted of an overall manager, the Assistant Chief Engineer, and individual project managers for each of the major initiatives. The Project Manager's role was to see that all projects met their intended delivery schedule and remained within the overall project budget. The Project Manager served on the Project Team during the conceptual planning and project development phase, directly managed the design consultants during the design phase and served as part of the Project Team in Construction. By reporting directly to the Chief Engineer's Office the Project Management team was able to get quick project decisions and served as the final authority when disputes arose during the development of the project.

The members of the Project Management Team have thorough knowledge of the various approvals and processes through which transportation projects must go. By running processes concurrently, starting approval processes earlier than normal, and by being part of the decision making process from the beginning and not allowing projects to get reinvented at each step in the process, the team has been responsible for delivering many complex projects in record time. The team has employed streamlined environmental processing, use of Construction Management to concurrently perform design and construction, and the use of stakeholder working groups to develop programs and projects and prevent the reinvention of projects by the public late in the project development process. Overall, we have found the single total project management concept to be a success.

2. Multi-Modal and Public Planning Approach to Major System Preservation Projects - Usually on major highway restoration projects where no highway expansion is being performed, where all work is done within the existing right of way, and where no environmental permits are required, the public participation process and the coordination with other modes of transportation is generally minimal if at all. For Delaware's reconstruction of the pavement of I-95, however, we chose to use the major disruption required by the project to develop a partnership with the general public and to develop transportation choices to relieve congestion during construction and hopefully become permanent after the completion of the construction.

A Public Working Group was formed including all stakeholders. Industry was asked to make presentations on methodologies available to reconstruct the pavement,

communities were asked to identify local issues which might be addressed by the project, other transportation modes were asked to produce plans for alternative services which might ease the burden during the construction and might also prove to be positive pavement additions to the transportation system.

The two-year planning process with the Working Group has resulted in a plan which has shortened a two or three year construction project down to 6 months, by allowing the contractor to completely close the Interstate in one direction at a time. Much of the additional traffic burden during the shut down must be accommodated by the local road system, with Integrated Transportation Management System (ITMS) improvements, and the additional transit services. The additional planning effort for a project of this type has resulted in a much shorter construction disruption and a potential for some permanent mode shift to relieve future traffic congestion. The local community has complete buy in to the project approach and all mitigation efforts have so far worked as designed. The project approach has received a very positive response in the State and Region.

Strategic Planning

Florida Department of Transportation

Mobility Performance Measure Status Summary

Session: Strategic Planning

Mobility improvement is a key goal of transportation strategic planning, and mobility performance measures make quantitative planning possible.

1. Key Challenges

We have had three key challenges in developing our mobility performance measures:

- Consensus: Mobility can be measured many different ways, involving wide ranges of cost and accuracy, as well as areas of applicability. People in several different functional areas had to reach agreement on how to proceed.
- Data: Some information is difficult to obtain, or costly, or less than accurate.
- Modes: We are working on the inclusion of all modes of travel. Modal differences in the location and timing of travel make it a challenge to present a unified picture.

2. Activities

Over the last three years, we have gone through periods of research, development, production, and refinement.

Research

We reviewed available literature for discussions of measures used or proposed by other agencies and researchers. These reviews grew into invitations to several national experts to visit Florida and provide us with first-hand accounts of their efforts and their thinking. We also contracted with a consultant company with expertise in the area to help us coordinate the information.

Development

We made several decisions regarding how to develop a mobility performance measure program. The first decisions involved the basic principles of performance measures. We decided to focus on measures that are simple, have a transportation user orientation, and are able to address multimodal considerations. Additionally, we emphasized the use of existing data to avoid creating an extensive and costly data collection program. Other decisions included what highway systems to use, how various transportation modes would be integrated, and what geographic areas to include. With these decisions in mind, we chose the following measures:

Quantity	Quality	Accessibility	Utilization
<ul style="list-style-type: none">• Person Miles Traveled• Truck Miles Traveled• Vehicle Miles Traveled	<ul style="list-style-type: none">• Average Speed• Travel Time• Reliability	<ul style="list-style-type: none">• Connectivity to intermodal facilities• Proximity to dwelling units, employment, and industrial/warehouse facilities	<ul style="list-style-type: none">• Vehicles per Lane Mile• % mileage heavily congested*• % travel heavily congested*• Hours/day heavily congested*

*"Heavily congested" means level of service E or F

We compiled the information we acquired, along with our decisions on how we wanted to measure mobility performance in Florida, into a handbook of recommended performance measures, their data sources, and their computational techniques.

Production

To produce the actual mobility performance measures, we employed a Department model that uses calculation techniques derived from the Highway Capacity Manual to provide estimates of congestion. From the model results we built large spreadsheets to display the measures in a variety of tables and charts, by various facility type, area type, and time combinations. All of the data involved the Florida Intrastate Highway System (FIHS), for which the most information was available. These initial results were used in the Florida Transportation Plan and the Department's Agency Strategic Plan.

Refinement

After the initial production of mobility performance measures, several refinements were added to improve the calculation techniques. The model, which was constructed earlier for much more than comparisons of volume to capacity, was cumbersome for our purposes. We replaced it with a database system using the same Highway Capacity Manual techniques, but specifically for performance measures. We also did some fine-tuning of some of the calculation algorithms themselves.

We also increased the system coverage. We added available data on the entire State Highway System, not just the FIHS, and worked toward adding information for corridors and for metropolitan areas.

3. Lessons Learned

In addition to the mobility performance measures themselves, we learned a great deal about the properties of field and modeled data, and how it is necessary to coordinate the participation of many parts of the Department in the development of the measures.

Field and modeled data

Field data—what actually happened at a particular time and location—are believed by some to be the only “real” data. We wanted to use field data as much as possible, but ran into some limitations. The biggest limitation is that the coverage of field data is not complete, in time or space. In some cases, it is not even representative of the areas most needing attention, due to the limitations of traffic recording devices in very slow-moving traffic. The field data are also not easily projected into the future with any accuracy. Modeled data are available for any place and any time, but may not be accurate at a micro level. After verifying some of the modeled data with field data at selected locations, we found that the modeled data were adequate for system-wide reporting, our primary concern.

Coordination

Mobility affects many parts of the Department, and all need to be involved. By including people from all parts of Planning and Public Transportation, we were able to avoid overlooking parts of the transportation picture. We also got a variety of viewpoints on each aspect of the process, which led to a better product.

4. Research Needed

The development and use of mobility performance measures are still evolving, and we would like to invest more research into the measures themselves and into the ways in which they can be presented to decision makers and the public, as well as into better incorporation of other transportation modes.

Research on Measures

A key measure of mobility is reliability. Reliability can be defined as the consistency in operation that a user can expect. This is important for travelers who want to know when to leave on a trip, and for shippers who need to be able to count on goods arriving at a specified time. For highway travel, reliability will probably be represented by the standard deviation of travel time, but we are investigating other methods as well.

Accessibility measures need further development to answer the following questions: How far from a major highway is close enough? What are the best sources of data for proximity to residences, employment, and industrial/warehousing facilities? What are the best sources of data, and how often should they be updated?

Research on Presentation

Information that is available but not in the right hands, or not completely understood, is not effective. We have ongoing research to develop ways to present the mobility performance measure results. Possible methods in addition to standard tables and graphs include dynamic displays and aerial photos. Media may include an Internet web site and CD-ROMs.

Research on Incorporation of Other Modes

The performance measures were designed from the beginning to involve all modes of transportation, but are now concentrated on cars and trucks on highways. Other modes of highway transportation need to be fully integrated. Eventually all modes of transportation will be analyzed, including air, sea, and eventually even space.

Strategic Planning

Florida Department of Transportation

Updating the 2020 Florida Transportation Plan

GOAL -- The goal of the 2020 Florida Transportation Plan Update process is to develop consensus recommendations on revisions to the 2020 Florida Transportation Plan (FTP) that respond to new ideas and changes in social, economic and environmental conditions statewide, and in urban transition and rural areas. Consistent with available resources, the update process will review existing priorities and suggest new ones. The Steering Committee and Advisory Committees will seek to produce a FTP that is brief, clear and user and citizen friendly.

KEY CHALLENGES

- **Developing Consensus** -- There are a wide range of transportation stakeholders who have an interest in the FTP Update. Actively developing consensus among them throughout the update process is our goal. Consensus procedures and guidelines have been developed and are being used in the process.
- **Leadership** -- While leadership is necessary in conducting the update process, a balance is necessary to avoid the outcome of the plan being viewed as the "Department's Plan". FDOT is using a facilitated process to ensure that all stakeholders have the opportunity for active and substantive involvement.
- **Parameters of the Update** -- A controversial parameter of the update process has been that the update is to be within the framework of existing and projected revenues. Participants have recognized that Florida has, and will continue to have, significant unmet needs in its transportation system.
- **Participant Diversity** -- Stakeholders have different levels of understanding of the planning, programming, and financing processes in Florida. Providing presentations and resources to the participants to achieve a common understanding of the processes is a key challenge.

ACTIVITIES

- Three Advisory Committees (Economic Development, Mobility, and Sustainability/Preservation), reflecting a balance of stakeholder interests and perspectives, have met seven times to review issues and develop consensus recommendations for updating the 2020 FTP. Reports documenting issues and recommendations unique to each committee and those that were common to all three were developed.
- Eight workshops were held around the state to receive comments on the Advisory Committee recommendations.

- A Steering Committee, formed to manage the process, has met five times and has begun to develop a single document to be submitted to the Florida Department of Transportation.
- The update process will include further public input and involvement in August and September.
- The Internet (www.dot.state.fl.us/planning/policy/2020) has been used to distribute meeting agendas and summaries and draft reports. A subscription email service is also being used to notify anyone interested in the process of new developments and opportunities to provide feedback.

LESSONS LEARNED

- Sufficient time must be allowed for the development of alternatives and to reach consensus. We have had to extend our original schedule.
- Participant availability and commitment is crucial. We did not identify alternates for Committee members when they could not attend a meeting, but probably should have.
- Neutral facilitation of the process is invaluable. Department participation must strike a balance between serving as a resource for explaining the current processes and being open to new ideas. A team effort between participants, Department personnel and facilitators is desirable.

RESEARCH NEEDED

- New tools for measuring economic benefits of transportation investments.
- Techniques to ensure implementation of the plan with continued involvement of the participants.
- New ways to measure *success* in implementing a "policy" plan.
- Reconciliation of Plans -- What level of reconciliation of a statewide strategic plan and strategic plans of our transportation "partners" is desirable/achievable/necessary? -- what does reconciliation of plans really mean? -- what do terms such as "compatible with" or "consistent with" mean?
- What is the appropriate level of public involvement? What is the best combination of involving practitioners in the process of updating a strategic plan vs. involvement of the general public.

Workforce and Reorganization Florida Department of Transportation Model Classification and Pay Program

The 1994 Legislature authorized the Department of Transportation (DOT) to develop and implement a model classification and compensation plan for its approximately 9500 Career Service employees. Our model, implemented in February of 1995, incorporates the principle of pay broad-banding and has also allowed us to develop new compensation, recruitment and selection, and performance appraisal programs which provide our managers with more flexibility in dealing with personnel than any other program used by the State of Florida. The DOT's classification system changes the philosophy behind how positions are classified and, consolidates classes far beyond what was ever anticipated in a more traditional classification reform project.

The basic classification plan is a simple structure composed of sixteen broad occupational groups, and a standardized structure of six classes in each occupational group. **This allowed reduction from 1700 classes in the current Career Service plan to 96 classes.** The initial plan was developed to eventually be utilized by all State agencies, as required in the enabling legislation. The DOT uses only 11 occupational groups and 66 classes.

The model plan has proven to be an efficient and effective program for both managers and employees. It emphasizes pay for performance and accountability and provides the data necessary for the effective pay administration and statistical analyses. The model was implemented at no cost and has required no changes to the basic structure since its inception.

ACTIVITIES

- Communication was one of the most important activities to ensure successful implementation. The Chief of Personnel and Assistant Chief of Personnel visited each of the eight Districts to provide supervisors, managers and employees training on all aspects of the new system. In addition, the Secretary of the Department provided a personalized letter to each employee describing the system and how his/her specific class would change upon implementation.
- A Pay Directive was established, as well as a process for overseeing/reviewing pay actions on a statewide basis.
- The employee review process was simplified and improved and a Superior Proficiency Ranking System was developed to document and reward performance.
- A competency based Recruitment and Selection Program was developed that eliminates the traditional minimum training and experience requirements associated with the old class specifications and replaces them with a position based system which identifies

- specific competencies (knowledge, skills, and abilities) for each position. In addition, the Department worked with the union to reach agreement on a position-based
- reassignment/promotion system to increase simplicity and flexibility of in-house recruiting for both managers and employees.
- Managerial and supervisory flexibility and accountability was integrated into the classification system and all of the other associated systems; recruitment, selection, pay administration, review and performance planning, etc.

KEY CHALLENGES

- Review all existing state classes, occupational groups and class series and consolidate to determine the occupational groups necessary to appropriately incorporate all state activities and determine the series structure necessary to define how employees do their jobs versus what kind of work they do.
- Crosswalk every existing state class (1700) into the new 96-class structure.
- Develop a classification and pay model with a no-cost implementation.
- Develop a completely new concept of classification for the state without requiring any changes to existing state data processing systems for personnel administration.
- Develop a new internal computerized information management system for managers and personnel administration to use to monitor the compensation system and ensure equitable administration of pay.
- Communicate with managers, supervisors, employees, and the union. Explain the new system, new responsibilities, new accountability, new flexibility, new opportunities.
- Negotiate agreement with the career service union.

LESSONS LEARNED

- The no-cost implementation required by the enabling legislation caused initial pay bands to be defined by the existing state pay structure rather than by market-based pay surveys and analyses. A better program would have included pay bands based on a market survey.

- Collective bargaining, overtime, and EEO assignments were also associated with the old classification system, reducing our ability to test and evaluate the model outside of the existing structure. This also caused DOT to have to maintain a comparable classification (a classification from the existing state classification system) for each of our positions.

RESEARCH NEEDED

- Research and statistical analyses are perpetual. The DOT regularly reviews position classifications and performs pay analyses to ensure equitable administration.
- The satisfaction of employees and supervisors with the Model Classification Program needs to be reviewed in comparison to the satisfaction of employees and supervisors under the standard state system.
- Need to look for other best practices in private enterprise to incorporate.

In summary, the new system emphasizes pay administration as a rational approach to management, and allows pay practices to be more accurately monitored by removing classification changes as a mechanism for granting pay increases. In addition, the new system establishes broad-based classes and pay ranges which allow flexibility in assigning work and filling positions by transfer and reassignment rather than original appointment; reduces the need for frequent reorganization of work units; adapts to changes in technology because the classes are broad enough to encompass future changes; and as a result, reduces administrative cost. Our new classification and compensation systems, along with other changes in recruitment and selection, and performance evaluation, give managers the ability to manage in a more rational manner and allow employees the opportunity to grow occupationally and financially.

Workforce and Reorganization Florida Department of Transportation Deferred Retirement Option Program

In 1998 the Florida Legislature created the Deferred Retirement Option Program (DROP) component to the Florida Retirement System. The DROP program allows an employee who qualifies for a non reduced retirement benefit to, in effect retire and draw retirement income while continuing in their current state job performing the same duties with no reduction in salary or benefits for up to 5 additional years. The employee's monthly retirement check is deposited into a tax deferred interest bearing account. The employee receives 6.5 % tax deferred interest annually on the money in the DROP account and is also eligible for an annual 3% raise (also tax deferred) on their retired income that all regular retirees receive. The employee does not have access to the money in the DROP account until the employee actually terminates state employment. The money in the DROP account must then be moved within sixty days of actual retirement and may be taken out in cash (taxes would be paid) or rolled over into an IRA account further deferring taxes. The employee can also take part in cash and roll the remainder into an IRA.

Reasons the DROP provision was approved include the following: First, the State was losing a number of senior and knowledgeable employees to outside employers. The employees retired from their state employment and took jobs with outside employers often making as much or more than they were paid by the state. Second, employees who worked for the state for thirty years (normal eligibility for non reduced retirement benefits) were still young and many could not afford to live on just their state retirement pay. DROP allows the employee to accumulate a rather sizable nest egg that can be used to supplement the state retirement pay.

ACTIVITIES

- Since we will have between 400 and 500 employees with 30 or more years of service leaving the DOT on or before June 30, 2003, we have begun to look at the impact that exodus will have on the department.
- We are more aggressively recruiting at colleges and universities, using Internet recruiting sources, requiring our supervisors and managers to identify employees who have the ability to move up to take on a more different role and are encouraging our employees to prepare themselves for future advancement opportunities.
- Each employee must have an *individual training plan* prepared and submitted and we are using this information to develop our training programs to develop our employees to their fullest potential. Supervisors and managers are responsible for scheduling their employees to attend identified training courses that will assist in their professional development.

- The department is also continuing to look at outsourcing as an additional way of reducing the impact resulting from the loss of skilled employees.

KEY CHALLENGES

Upon very short notice the State Division of Retirement had to develop the rules and provide information to employees about the DROP program. Agencies had to relay the information to employees and prepare for a rush of program applicants. The program began on July 1, 1998, and employees who already possessed more than the minimum requirements for regular retirement were grandfathered in and could then join DROP for the full five year eligibility period. There were over 40,000 state employees eligible to join DROP on July 1, 1998. Florida DOT had almost 800 eligible employees. Putting the program in place, information dissemination, DROP application processing and employee timely enrollment caused a tremendous workload. It has eased now that the backlog of grandfathered applicants has been processed, and we are now processing DROP applications as employees qualify.

LESSONS LEARNED

Prior to implementing DROP the state had not looked at any strategies to offset the loss of so many long term employees at one time (5 years after implementation of DROP). There was also some significant financial impact when so many employees were grandfathered into the DROP program which resulted from employees choosing to take their annual leave accumulation (vacation time) as a payout upon entering DROP. Career Service employees had the option of being paid for up to 240 hours of annual leave and Exempt employees could be paid for up to 480 hours.

RESEARCH NEEDED

We really will not know the full impact of this program on agency operations until after the initial group of DROP enrollees leave in June 2003. It also will take the State Division of Retirement quite a number of years to determine if implementation of DROP will have any adverse impact on the solvency of the State Retirement System. This first true impact of DROP statistics will allow us to research these two significant areas. Meeting recruitment needs and filling key technical positions may be a significant issue after June 2003.

Overall, DROP has been considered as a significant benefit to employees who are eligible to retire. It is also considered a positive benefit for state agencies because it allows us to retain expertise for up to 5 years while providing time to locate and prepare adequate replacements. It has also allowed State Agencies to retain a number of qualified employees.

Process and Program Delivery Florida Department of Transportation Level of Private Sector Contracting

Partnering and contracting for services with the private sector is a major part of the Department's business plan to deliver transportation programs and projects. Historically, the Department has contracted with private consultants for design and with the construction industry for building of our highways and bridges. However, over the years privatization has grown in other areas. The Florida Department of Transportation (FDOT) currently privatizes approximately 61 percent of the planning effort, 72 percent of our design work, 100 percent of construction, 70 percent of maintenance activities, 81 percent of toll collections, and 68 percent of Construction Engineering Inspection (CEI). Contracting with the private sector where it makes good business sense helps the Department deal most efficiently with the myriad of transportation services it provides.

Increases in privatization have been driven by the continued growth in the Department's programs and funding levels, both from increases in state funding and federal funding. As an example, the Department's construction lettings have doubled over the past ten years, from \$514 million in 1989 to \$1.2 billion in 1999. This increase in construction activity has required the Department to look to the private sector for additional resources in all phases of our transportation business.

ACTIVITIES

In the planning, and design efforts the Department has expanded the role of our engineering consultants to include District-wide (D/W) consultants and General consultants. The D/W contracts are areas where general scopes of work are set for traffic operations, utility locations, soils, design, resurface, structures, drainage and CEI, a consultant firm is selected and work orders are issued as needed to support our projects. The role of the general consultant is basically the same but the scope of work and the contract requirements are to support our in-house staff. We have general consultant contracts assigned to each district office. The increase in consultant support has been driven by the increase in our number of projects and programs.

In addition to doing a greater volume of private sector contracting, we are also changing the way in which we contract. Two such initiatives which are underway are: Alternative Construction Contracting Practices and the I-75 Asset Management Contract.

Alternative Construction Contracting Practices began in 1996. The Florida Legislature authorized the Department to use alternative construction contracting techniques with the intent to control time and cost increases on construction projects. These practices along with time-plus-money, design/build and incentive/disincentive are currently underway. It is the intent of the Department to use these various techniques on a wide range of projects in order to determine which techniques work best on different types of projects. The Department continues to evaluate the results of completed projects and assess issues concerning ongoing alternative contracts.

The results have been good and we have seen time saving and decreases in construction costs. However, in the time the program has been implemented it may not have provided the quantity of data necessary to make an overall judgement of success verses "needed improvement" on all facets of the program.

And in the maintenance area, the I-75 Asset Management Contract is a first for the FDOT, it is a corridor maintenance contract, it includes Interstate 75 within Collier County in District 1, and Interstate 75 in all of Districts 4, 5, 6, and 7 for a distance of 253 centerline miles. The contractor will perform all routine maintenance activities associated with pavement, bridges, drainage, rest areas, vegetation and aesthetics and incident management. Proposals were accepted April 10, 2000, the Intent to Award was posted May 1, 2000 and the contractor is set to begin work on July 1, 2000. The contract is for seven years with a fixed price of \$10.5 million. It is estimated that over the seven year contract period, the asset management contract will save more than \$12 million.

KEY CHALLENGES

- Buy-in by DOT employees.
- Buy-in by the industry, convincing the industry to accept new contracting and bidding practices.
- Development of scopes and deliverables with appropriate legal documents
- Federal Highway Administration acceptance with authorization of funds.
- Development of scope-of-work for performance contracts.
- Selection of projects for the Alternative Construction Contracting Program.

LESSONS LEARNED

- Industry must be a partner and support the initiatives.
- Acceptance by the private sector of new performance based contracting methods (I-75 maintenance contract).

RESEARCH NEEDED

- Time and construction costs saving with Alternative Construction Contracting methods versus conventional low bid contracting methods.
- Impact of the low bid method of contracting on quality of product.

CAO SESSION I
STRATEGIC PLANNING –DRIVEN INITIATIVES
Idaho Transportation Department

MISSION STATEMENT:

“We provide high-quality, cost-effective transportation systems that are safe, reliable, and responsive for the economical and efficient movement of people and products.”

VISION STATEMENT:

“We envision transportation systems and services that are characterized by safety, reliability, and innovative technology and are founded on a workforce of highly trained, motivated and committed employees. We will continue to be sensitive to the environment while integrating the multiple interests of all citizens, visitors, business, industry and government.

It is our vision that Idaho’s transportation system and services will provide a competitive edge to businesses in their expanding markets. ITD will continue to be a leader in implementing one of the most efficient, responsive and cost-effective transportation and service delivery systems in the nation. Idahoans will have a modern, balanced, and integrated multi-modal transportation network that is efficient, safe, and dedicated to a quality environment. The transportation system will continue to be developed to accommodate future population growth while minimizing congestion, improving air quality, and preserving scarce resources.”

INITIATIVES:

Idaho Code established in 1995 that all state agencies have a strategic plan that is updated annually. In 1994, a department-wide management retreat established the mission, vision and corporate values that the department would strive to achieve. The department established a Strategic Planning Team and implemented a comprehensive strategic planning process. The planning process involved all divisions within the department. No area was excluded from the process and Aeronautics, Highways, Public Transportation, Transportation Planning, Motor Vehicles and Administrative Support each established goals and set measurable targeted performance standards. Annual performance measurements —past, current and projected—would be reported when the plan was updated annually. Management was held accountable for their strategic planning efforts in their annual performance reviews.

Initially, goals and targeted performance standards were established at all levels within the department. Our strategic plan in 1996 and 1997 was over 400 pages and contained many performance standards that were attained within one to two years. In 1998 the Strategic Planning Team decided to concentrate on those goals and targeted standards that would require a shift of resources such as personnel or finances to attain. Percentage of deficient pavement, number of deficient bridges, miles of congested roadway and percentage of driver’s licenses renewed by mail were just 4 of the department’s remaining 42 targeted performance standards in the FY 2000 Strategic Plan.

CUSTOMERS:

The department completed a statewide highway user's survey (via telephone) in 1999 (this was in large part a replication of the NQI National Highway User Survey, on a state level). One area of the survey that the NQI survey did not address was support for the use of federal or local highway user taxes and fees as a means of funding highway maintenance, repairs and improvements. Respondents were also asked what additional amount they would be willing to pay in state fuel taxes in order to "significantly improve" the characteristic they considered the highest priority for highway improvement. Two demographic questions were also asked—the number of licensed drivers, and the number of Idaho registered vehicles in each interviewed household. The results of that survey can be used as outcome measures to flag whether the goals the department has set are being accomplished to the satisfaction of the highway user. Future surveys can be used to measure customer satisfaction movement.

The Idaho Transportation Department has a "customer convenience" policy that impacts areas of the department from construction and maintenance activities to vehicle registrations. Several of the department's targeted performance standards are a direct result of customer convenience policies. One of the goals in Motor Vehicles is "to increase customer convenience in motor vehicle application processes." Performance measures supporting this goal are the (1) the percentage of driver's licenses renewed by mail, (2) the time required to process vehicle titles, and (3) the percentage of overlegal permits transferred electronically.

AREAS OF STRATEGIC FOCUS:

The department is strategically addressing four primary focus areas that apply directly to highways. They are (1) roadway surface conditions, (2) critical bridges, (3) highway congestion, and (4) highway safety. Because of this strategic emphasis the department continues to earn state and national recognition. Recent awards for uniformity in materials testing, construction quality, technician-qualification programs and enhanced use of computers in the engineering and transportation field are solid indicators that the department is making positive strides toward accomplishing its goals. A Continuous Quality Management Team within the Division of Highways oversees the direction of the division for the 21st century.

FINAL STATEMENT:

Overall the goals, targeted performance standards and identified strategies toward accomplishing those standards have made this department more efficient and visionary. What we thought five years ago would be great accomplishments are today becoming matter-of-fact. For example, in 1994 our State Highway System had 37% of the pavement rated as deficient (poor or very poor). At the time we thought that we could reduce this to 18%. Today our target is 15% and we believe it is achievable by FY 2004. Strategic planning has given us the ability to stretch, and that is good. While the day-in and day-out business-as-usual activities that run our department are important and highly visible to the public, those activities will not and cannot address the need to envision a better transportation system and services. It is that "envisioning" process that will truly assist us in meeting Idaho's rapidly expanding transportation needs and challenges and to continue to provide excellent transportation services for Idaho citizens and visitors.

CAO SESSION II
WORKFORCE AND REORGANIZATION-DRIVEN INITIATIVES
Idaho Transportation Department

KEY CHALLENGES:

1. Recruitment and Retention. In the past two to three years, engineers, IT and skilled trade positions have presented the most challenge in recruitment and retention. Recently, we are seeing an increase in difficulty recruiting for administrative and technician positions. This is reflective of the current job market.
2. Flexibility within the confines of the laws, rules and department policies. State recruitment process is cumbersome and time consuming. Qualified candidates are often lost to private industry because of the testing process and the length of time it takes to get a job with the state.
3. Workforce planning to ensure a smooth seamless transition as senior employees leave and are replaced by less experienced staff.

ACTIVITIES UNDERTAKEN

Organizational Structure

- Regionalization of district offices: Created by region and managed by an assigned engineer. The regional structure allows the manager to utilize staff via cross-utilization of both maintenance and engineering personnel predominantly in the transportation technician series. In an effort to maximize all resources, the Division of Highways' management decided to cross-utilize maintenance personnel to help with summer construction and use construction personnel to assist with winter maintenance.
- Cross-functional Teams: ITD routinely uses cross-functional teams to solve problems, make decisions and implement new programs. Each team has an executive sponsor and represents a cross section of the department to ensure a variety of perspectives. There are trained facilitators that are used regularly to ensure effective meetings and record them

Staffing

- Non-managerial Career ladder: Classifications were developed for Technical Engineer I & II to allow engineers with a high level of technical expertise to promote to a level equivalent to managerial level engineers. These technical engineers also provide statewide expertise. This expertise provides for proactive identification of potential problems early in the construction process.
- Construction Management Classification: As the nature of the responsibility for construction projects changed, it was apparent that a different type of project manager was needed. We created a construction manager associate and a construction manager classification to allow for better project oversight by contractors that used to be done by department staff.
- Core Competencies: The ITD performance appraisal system identifies core competencies, both task and behavioral. Core competencies are those skills and abilities that are essential for good performance in a specific job. The department takes a proactive

approach in selecting employees by incorporating core competencies in the interview questions that help outline our expectations to accomplish the department's mission.

- Streamlined recruitment method: ITD has experienced difficulty attracting high demand jobs primarily because of the cumbersome recruitment process employed in a Civil Service system. We have eliminated the testing process and are now reviewing and rating resumes for placement on registers for engineers-in-training, staff engineer and IT positions. Supervisors can make immediate conditional employment offers pending register placement. The register is established that same day or no later than 24 hours. Staff engineer and IT hires can be offered up to maximum of the pay range. Candidates for other mission critical positions can be offered up to 94.9% of the pay range.
- On-line recruiting and application process: Announcements now posted on line have the potential of drawing more applicants. The process is faster and easier. For those who do not have access to a computer, jobs are posted in various locations throughout the state and are often advertised in local newspapers and trade magazines.
- Self-rating exams: The transportation technician exam use to require a level of writing skill that many applicants did not possess or were required to do the job. This testing method has been eliminated and replaced by self-certification exams that use a bubble form. This testing method is also used for multiple administrative support positions. Self-rating exams and self-certification have proven to be most effective as they can be done at home or on the spot and submitted for immediate scoring. Consequently, registers are established faster and job offers can be made sooner.
- Attendance at job/career fairs: Human Resource Services has increased ITD visibility at these kind of fairs resulting in an increase in applicants.
- Intern programs: Expanded intern program from nine to 26 positions. Internships now available in Construction Management, Accounting, Mathematics and summer intern work.
- "Home grown" information technology staff: A plan is being developed for recruiting ITD employees who may have the interest and aptitude for information technology. The department will invest the time and expense to train qualified applicants.
- Expanded training opportunities: The technical trainers for the Division of Highways have increased from two to eight with placement in each office. Human Resource Development is increasing skills training for all employees with emphasis on Supervisors and Managers. HRD has increased technical training with one full-time and two temporary positions.
- Succession planning: In a proactive approach to filling management vacancies, a team is assigned to research and develop a succession planning program. The goal is to keep business running without interruption when managers retire or leave the department.
- Project management skills: Employees are receiving software training to enhance their ability to do computerized project management activities. Additionally, a project management approach to work is being piloted in one of our district offices and by the design section in another district office.

CAO SESSION III
PROCESS AND PROGRAM DELIVERY-DRIVEN INITIATIVES
Idaho Transportation Department

The Idaho Transportation Department (ITD) has been deeply involved in process improvement efforts for the last seven years. The effort began with a review of what we did and why. From this a list of areas needing review was made and several teams were established to address each. Since that initial start there has been a continuous effort to streamline the way we do business.

ITD is currently using QC/QA contract specifications in both asphalt and aggregate work. We have also started working toward the same concept in the concrete processes. The changes are being made in concert with the contracting industry with the Idaho Chapter of the Associated General Contractors serving as our partners. These procedures have given the customer a better product at the same or reduced price. An additional benefit is the reduced maintenance effort required upon contract completion.

The Department is emphasizing public convenience in all of our efforts. We are currently using A + B bidding, lane rental and other incentive based contracting procedures to lessen the impact of construction and maintenance on motorist. There has been varying levels of success in these processes. Overall there has been a reduction in the time contractors are spending on the highways.

ITD has been a proponent of construction partnering since the early 90's. Our contractors are invited to voluntarily participate in partnering on all of our major projects. The resident/regional engineers and contractors have the option to enter into partnering even on those projects that do not have the special provision included. This culture shift is encouraged on all projects. There have been a few instances when the partnering philosophy has been used in the project development process also. This has proven most beneficial when the time frames are short and there are numerous stakeholders from outside the Department that are intimately involved in the project. Facilitation has been done by consultants and ITD/Contractor teams.

The Division of Highways started a focused process improvement effort in 1997. There are six emphasis areas that were identified as high priority and teams established to address these areas. Project delivery and its tie to comprehensive and focused planning is one of these areas. There have been significant changes made to the concept scoping process as a direct result. The goal of the change is to start the environmental and right of way portions of development sooner. This effort involves a multidisciplinary team approach that identifies "road blocks" to delivery as early as possible. ITD is also beginning to use the Project Manager approach to project delivery. This involves assigning responsibility for delivery of individual project(s) to one individual. We are now pursuing the proper Project Management Information System to provide these people with the tool for the job.

Compensation

- Pay for Performance: ITD recognizes performance through incremental percentage increases for three levels of performance: Meets Expectations, Exceeds Expectations, and Significantly Exceeds Expectations. Salary savings is used to supplement the amount of merit money provided by the legislature. One time salary savings is used to provide bonuses for exemplary performance. ITD has been able to give performance raises every year.
- Special pay policies: Special policies have been developed to allow managers to hire at a rate of pay that is competitive with the market requirements up to 100% of the pay range for staff engineers. Other classifications that are difficult to recruit for can also be offered higher rates of entry pay as needed but may require approval of a division administrator. Skill pay is given to employees in the Right of Way section and for Geologists and Land Surveyors upon gaining licensure, certification or completing examination.

LESSONS LEARNED

- Broad impact of responding to specific problems (fixing one problem can sometimes cause multiple problems e.g., hiring staff engineer above policy. Current staff engineers who were making less were angry. Moved all engineers to policy. Other employees upset because engineers are getting special treatment).
- Consistent treatment of employees particularly for pay decisions is impossible in a dynamic environment that is affected by market conditions and federal initiatives that drive the requirement for certain types of jobs.
- Lack of a structured workforce planning program has caused us to fill mid-level management positions with staff who are not quite ready to assume this level of leadership. This inexperience has created more intervention of senior level management in decision making and problem solving that should not need to be made at their level.

RESEARCH NEEDED

- Outsourcing various types of work and providing the skills to do contract management and oversight
- Multiple pay lines
- Broad-banded classifications
- Review of laws, rules, internal policies that are no longer working, outdated or restrictive.
- Succession Planning

Kansas Department of Transportation

STRATEGIC PLANNING

KEY CHALLENGES FACED

- **Time -** Based upon our success in completing the last major infrastructure improvement program, the Comprehensive Highway Program (CHP), the Kansas legislature passed a new program, the Comprehensive Transportation Program (CTP). This program establishes KDOT's direction for the next 10 years. With so much activity required to get the program underway, and keep it on target, it is difficult for senior management to put aside the constant demands of daily decision-making to focus on the issues which may or may not have impact in the long term.
- **Reluctance to change -** Due to the success achieved with the completion of the CHP, it is difficult to convince managers that there is a better way of doing things. The old adage "if it ain't broke, don't fix it" is often difficult to dispute.
- **Communication & Understanding -** An idea or concept conceived at the executive level is subject to several levels of interpretation by the time it becomes a reality. It is difficult to ensure that people, at all levels (upper, middle, and lower management), understand what is required to make the strategic planning process work.
- **Coordination -** In a large agency, such as KDOT, there are many plans created by the various divisions. It is very difficult to ensure that all of the elements of these plans are consistent with one another and the agency's vision.

ACTIVITIES UNDERTAKEN

- **Performance Monitoring -** We have instituted a series of high-level performance indicators called Critical Success Indicators which give management a 'snapshot' of the agency on an annual basis. These measures are intended to give managers a 'dashboard' of indicators they can rely upon to make decisions that focus the agency's efforts in the areas where improvement is needed.
- **Quarterly Reporting -** We are establishing a reporting process that requires executive management to meet once each quarter to discuss strategic issues and operational performance measures (at, or below, the level of the Critical Success Indicators mentioned above). The results of these meetings would then be shared in similar meetings throughout the agency for the purpose of facilitating communication and understanding (for every level of management).

LESSONS LEARNED

- **Power of Measurement** - During the CHP, the Kansas legislature, with the aid of KDOT, set forth a number of milestones that had to be accomplished. These milestones became the focus of agency activity and reporting. This acted as a catalyst for establishing many of the management processes that KDOT continues to use on the new CTP.
- **Listen** - Learn to be open to suggestions from all levels of management for improvements to your plan and your process. Some very good ideas often come from the most unexpected places.
- **Simplicity** - Do not develop a complex strategic planning process that is not easily understood and used by all levels of management. KDOT is continually attempting to simplify its plan.
- **Incremental Establishment** - Managers must be convinced that change will be beneficial. Initially make small changes that will produce obvious benefits in a reasonable amount of time. Do not overburden managers with an overwhelming number of tasks and activities. Try to make new processes as 'environmentally' friendly to your current business processes as possible.

RESEARCH NEEDED

- **Research Measures** - Learning more about how others measure the cost-benefit of their investment in research of new technologies and techniques for construction and maintenance.
- **Experiences of Others** - A comprehensive report detailing the obstacles other DOT's have encountered and what actions they have taken to overcome them would be extremely beneficial. This workshop should be a good first step in learning about what others are doing!

KANSAS

Workforce and Reorganization

Workforce initiatives for the Kansas Department of Transportation have centered on changes needed in recruiting applicants and in changing the work environment to enhance our ability to retain employees. To this end we've worked on several initiatives.

Recruitment Initiatives

- **Creation of a Signing Bonus.** KDOT now has the ability to pay a newly hired engineering employee 10% of their annual salary as a signing bonus. If the employee leaves before the end of their first year of employment, pursuant to a contract the employee signed, he/she will need to repay the bonus to KDOT.
- **Creation of a Retention Bonus for non-licensed engineers.** KDOT now has the ability to pay a non-licensed engineering employee 10% of their annual salary as a retention bonus. If the employee leaves before completing the year of employment following the signing a contract and receipt of the bonus, he/she will need to repay half of the bonus to KDOT. The bonus amount will increase incrementally over the next 6 years from 10%-15% of the employee's annual pay at the time of the bonus.
- **Creation of a Retention Bonus for licensed engineers.** KDOT now has the ability to pay a licensed engineering employee 15% of their annual salary as a retention bonus. If the employee leaves before completing the year of employment following the signing a contract and receipt of the bonus, he/she will need to repay half of the bonus to KDOT. The bonus amount will increase incrementally over the next 6 years from 15%-20% of the employee's annual pay at the time of the bonus.
- **Creation of a Recruitment Bonus.** If a current KDOT employee helps recruit an applicant for an engineering position with KDOT, who is hired in at an Engineer Associate II level or higher (not through our college recruiting program) then that employee will receive a lump sum bonus of \$500.
- **Starting Pay Differential for Passage of the FE Test.** KDOT will pay a 2.5% higher starting salary for an Engineer Association I employee who has passed the Fundamentals of Engineering examination before starting as an EA I with KDOT.
- **Starting Pay Differential for Equipment Operators and Engineering Technicians in Select Geographic Locations.** KDOT now pays higher starting rates of pay to employees in geographic locations with demonstrated difficulties dealing with recruitment and retention.

Key challenges faced in implementing these initiatives surround the fact that these initiatives are not applicable to all employees. This is a change from traditional practices in Kansas where all employees are/have been treated identically. It is safe to say that many employees have not responded well to the changes that these initiatives bring. While we explain that other initiatives will be considered for different groups of employees, those who are not included in these early efforts are unhappy about the prioritization which has been necessary to work on major recruiting initiatives.

Lessons learned from these first efforts are that it is likely we have been successful in these attempts only by focusing on data driven needs and efforts. Not only has this helped strengthen our arguments in favor of implementing these initiatives, it has helped in explaining why we made the decisions we did and took the actions we did.

Retention Initiatives

- KDOT has implemented pilots of flextime schedules to help employee's better balance their work and family lives. Options available include working four nine-hour days and one four-hour day or varying the starting time of a standard workday so that the employee can start work at 6:00 AM ending at 2:30 PM or as late as 9:00 AM, ending at 6:00 PM.
- We are getting ready to implement a new program where we reimburse employees for safety boots and other designated safety items that KDOT has not traditionally supplied. Since we are unable to enhance compensation easily, we are looking at non-traditional methods (in Kansas's government) to demonstrate to employees that we care about the demands placed on them by their employer.

Key Challenges in this have been changing the mindset of managers that the "way we have always managed employees" must change for today's work force. It has also been a challenge to help managers understand that we need to look internally to find solutions to retention problems as opposed to thinking that the change has to come from the outside such as through legislative initiatives.

Process and Program Delivery Initiatives

KANSAS DEPARTMENT OF TRANSPORTATION

Several of the major initiatives by KDOT include Partnering, Warranties, QA/QC and Outsourcing. Another initiative that is being considered is Design/Build.

We are partnering with our contractors to continually improve the quality of the end products. Some of these initiatives include warranties, QA/QC and consultation on the constructability of major projects. Some of the major obstacles include reluctance to change, overall coordination and implementation, buy-in and cost. Some of these were overcome by with good planning; meetings with open discussions and clearly defined goals and objectives, and expected results. Early involvement of all the partners' is an important criterion for success.

We are partnering with some of our larger local units of government by providing the opportunity of them overseeing all phases and major actions of a project under their jurisdiction. This includes, design, letting, awards to contract and construction inspection. Some of the major obstacles were the attempt to blend federal oversight requirements with city procedures.

Pavement marking warranties are being initiated, as mentioned above. These specifications will take effect this July. Expectations include some higher cost with overall longer-life markings and better retro-reflectivity. Contractors and manufacturers were made a part of the team and assisted in the overall review process. Enforcement issues are a concern.

Outsourcing design and construction inspection is not new to KDOT. Approximately 80% of design work are contracted and have been very successful. We partner with our consultants and continue to seek ways for improvement. We also outsource rest area maintenance, which has been quite successful.

QC/QA initiatives have also been implemented. It is too early to determine the success of this initiative. However, it has been a learning experience for those involved through the coordination efforts and the necessary partnering between KDOT and the contractors. This initiative may have increased cost associated with it.

Any initiative implemented must be continually be reviewed by all involved parties and the processes can be refined. This takes time and effort and continual partnering atmosphere with good communications. Otherwise, successes can become failures over time.

KENTUCKY TRANSPORTATION CABINET

WORKFORCE AND REORGANIZATION SUMMARY

Organization Reconfiguration

Up through the mid-1990s, the Transportation Cabinet's product and service delivery processes were generally based on centralized review and approval. These work processes were accomplished by an organizational structure of multiple field offices and a central office that resulted in longer than desired cycle times.

In 1996, the administration initiated an aggressive business process re-engineering initiative, EMPOWER Kentucky, that involved seven core transportation business processes. The focus of this initiative was on the workforce and the application of information technology. Cross-functional teams of employees were established to map existing business processes. These teams were given the responsibility to, if necessary, redesign the work processes to include workforce, organizational, and information technology changes.

All seven process redesigns included numerous workforce and organizational changes. The major change involved pushing decision-making down in the organization to the lowest possible level. The objective was to "empower" frontline employees by providing them with the knowledge and means whereby they could make decisions without needing central office approval. In essence, the Transportation Cabinet was decentralizing.

Examples of this decentralization include: (1) construction resident engineers approving the majority of contract change orders, (2) project development teams in the district offices being responsible and accountable for the timely delivery of projects, (3) county crew level input and use of daily maintenance activity information, and (4) district supervisors making daily decisions on the maintenance of the rest area infrastructure. For the most part, these changes have been viewed as opportunities and readily accepted by the field employees.

Examples of organizational reconfiguration include: (1) establishing an environmental coordinator position in each district office to facilitate the environmental aspects of project development, (2) reducing the number of construction middle management positions in the central office, (3) reducing the

number of warehouse employees as a result of reducing inventories and allowing field employees to direct purchase routine items, and (4) establishing a human service transportation delivery work unit to address the public transportation needs of rural Kentuckians. As was expected, reducing the number of employees met with some resistance but displays of strong commitment and compassion by top management overcame this resistance.

Staffing

As previously mentioned, all seven EMPOWER Kentucky process redesign teams recommended changes impacting the workforce. These changes include increasing or decreasing the number of employees, raising base pay, providing a career path, raising the minimum requirements, and enhancing training.

One of the more significant changes involved the frontline maintenance and traffic employees. These have traditionally been positions that are difficult to fill due to the low pay scale, especially in urban areas. There are now eight different positions in the career path for these employees, they all received base pay increases in 1999, the minimum requirements for new employees in these positions were raised in 1999, and the crew supervisors must complete a prescribed curriculum that broadens their technical knowledge and skills.

The Cabinet's construction program is moving to a quality control/quality assurance approach. This means the contractor is responsible for quality control of the daily work and the Cabinet conducts appropriate quality assurance activities. In partnership with the construction industry, both contractor and Cabinet employees must complete project quality control training.

Cross-functional teams are being utilized in the project development process to identify and resolve issues as the project develops rather than during a later review. Performance measures are being used to track the ability of these cross-functional teams to meet project schedules. Cross-functional teams are also being utilized during post construction reviews to identify lessons learned.

KENTUCKY TRANSPORTATION CABINET

PROCESS AND PROGRAM DELIVERY ACTIVITY SUMMARY

The Kentucky Transportation Cabinet recognizes that process and program delivery systems must be rigid enough to provide a framework for program development and performance measurement, yet flexible enough to permit a variety of approaches to individual project development. In the Post-Interstate Construction Era, there is no “cookbook” approach to program development and implementation. ISTEA and TEA-21 outlined more open processes, specifically as these processes address environmental and public involvement issues. Truly, transportation concerns have become more intricately woven into a larger social fabric, and must be considered in this context if transportation decisions are to be effective.

To maximize effectiveness in delivering its programs, the Kentucky Transportation Cabinet has initiated a number of process changes. First and foremost in the new processes is an understanding that functional boundaries must be blurred. Planning, Project Development, Construction, and Operations functions exist as a general framework for process definition, but actual program delivery systems revolve around teamwork among the functional areas. Operations, Planning, and Project Development activities work in concert to identify transportation priorities and initiate appropriate project and program coordination and public involvement actions earlier than ever before. Project Development, Construction, and Operations activities work in concert to ensure that constructibility and maintenance issues are recognized and dealt with earlier than ever before. It is the Transportation Cabinet’s goal to improve both the quality of our transportation programs and the efficiency with which we deliver program improvements.

The key challenge we face is overcoming existing Cabinet culture. By emphasizing the need to fit transportation decisions within larger societal desires, we are shifting the paradigm of many of our employees. Rather than deciding, announcing, and defending transportation decisions, we are engaging in constructive regional and metropolitan dialogues to craft more regionally and community-sensitive solutions to transportation problems. This approach to program development and delivery requires that Cabinet employees expend more effort and possess greater communication skills than ever before, and this requirement has met some resistance. We are making great progress, however, and already see the benefits of engaging the public and local entities early and often in program delivery processes.

Some of the activities we have undertaken to effect the Cabinet’s “culture change” are as follows:

- We have created a transportation planning process in which both rural and metropolitan needs are considered and prioritized. We have established transportation committees in each of our fifteen regional Area Development Districts (ADD) and

continue to draw from the expertise of our seven MPO transportation committees. The ADD process recently won an award from the National Association of Development Organizations as a “best practice”.

- We have initiated a planning-level process to identify particularly sensitive transportation projects. Once these projects are identified, we engage in early agency coordination, early public involvement, and efforts to more clearly define the purpose and need for the project as a basis for further development of the project.
- We have instituted training in “context sensitive design” for Cabinet staff and our consulting engineer partners. We have received national recognition for design of the widening of Paris Pike, a historic corridor between Lexington and Paris, Kentucky.
- We are developing a series of graduated workshops to heighten awareness of social and environmental issues for those casually involved in our processes, to inform those needing a deeper understanding of those issues, and to provide detailed instruction for those intimately involved in the assessment of social and environmental impacts.
- We have designated project management coordinators to facilitate the development of projects from the early planning stages through construction letting.
- We have established a process for routinely bringing Project Development, Construction, and Operations personnel together to discuss both design opportunities and corrective measures needed to ensure that projects can be built as designed and maintained with minimum problems after construction.

In addition to the above process changes, we are developing maintenance management techniques to facilitate the assessment of transportation needs and priorities. We are also working to better tie Cabinet performance measures to resource allocation through a biennial “Business Plan”. Efficiency of process and quality of product are themes woven throughout the changes underway within the Cabinet.

The Cabinet has learned that program delivery is only as successful as we allow it to be. By embracing the changes that society says we must, we are opening many opportunities for “win-win” scenarios with our customers and partners. We will carry these changes as far as necessary to achieve the delivery of only the most desirable, most carefully considered transportation improvements across Kentucky.

While research into the specific process and program delivery issues described above would be very helpful, most of Kentucky’s experience is being developed “on the fly”. We would encourage additional research into organizational effectiveness issues, transportation agency employee training needs, and the benefits of early project coordination and early public involvement. We are confident that we are on the right track, but would appreciate having more research and greater sharing of success stories in this regard.

**CAO Workshop On
Managing Change in State Departments of Transportation**

CAO SESSION I: STRATEGIC PLANNING –DRIVEN INITIATIVES

**Prepared By The
Louisiana Department of Transportation and Development
Kam K. Movassaghi, Ph. D., P.E.
Secretary**

Presented June 26, 2000

In the fall of 1998, Governor Murphy J. "Mike" Foster appointed Dr. Kam K. Movassaghi Secretary of the Louisiana Department of Transportation and Development (LaDOTD) to lead DOTD into the 21st century. A goal of the DOTD Strategic Plan was to review of the current process for the identification, prioritization, and selection of highway projects. Secretary Movassaghi presented a concept to the staff to allocate available transportation design and construction budget funds to address different types of projects independently of one another, yet grouped in four Program categories: (1) System Preservation, (2) Traffic Safety, (3) Additional Capacity/New Infrastructure, and (4) Operations/Motorists Services. Three categories of highways were considered, namely the National Highway System (NHS), the Statewide Highway System (SHS), and the Regional Highway System (RHS).

Utilizing the four program categories an evaluation was made of the amount of funding that had historically been invested in each category in prior years. This analysis indicated that approximately 65 % of all funding went to System Preservation, approximately 15 % to Additional Capacity/New Infrastructure, and 10 % each to Traffic Safety and Operation/Motorists Services. In order to evaluate the impact of these investments Secretary Movassaghi requested the staff to quantify the relative change to each program category. Using the pavement and bridge management system data it was shown that overall pavement and bridge conditions had improved. With regard to new capacity improvements there were no readily available data to quantify system improvements. The same was true for the Traffic Safety and Motorist Services categories. Consequently evaluation or measures of effectiveness are being developed.

The key challenge that lead to the development of this approach to overall program development was necessitated by the projects in each program area that exceeded any realistic available funding level. The categorical program approach eliminated the competition between projects as a whole and limited the competition to within a program category. Second an awareness of the level of investment in each program category was clear. Finally, the effectiveness measures would provide a quantifiable means to set future levels of investment with some degree of the direction and level of impact that could be anticipated.

To implement this Project Selection Process required the development a systematic flow of planning events capable of meeting legislative approval. This process can be described as follows:

1. Delineation of the Highway Network
2. Presentation of Condition Data
3. Program and Project Inputs from Participating Agencies
4. Development of Needed Projects List for each Program Category
5. Prioritization Process
6. Final Project List by Program Category
7. Legislative Approval

Having developed this Project Selection Process the next challenge was to integrate the project development process with the NEPA and Corps Section 404/10 environmental process. Within DOTD a project scoping and definition unit is being established. A process flow consisting of the following is being developed:

1. Program Development
2. Project Purpose and Need Statement
3. Project Scoping
Concurrence Purpose and Need Milestone #1
4. Alternatives Development
5. Alternatives Analysis and Screening
Concurrence Alternatives Milestone #2
6. Draft NEPA Document
Concurrence Selected Alternative Milestone #3
7. Final NEPA Document
Record of Decision Milestone #4
8. Final Design
9. Appropriate Agency Permits Issued
10. Project Construction
11. Post Construction Permit Compliance Review

The development of the Project Selection Process and the subsequent Project Development Process are now being implemented.

MINNESOTA Department of Transportation
CAO Session I: Strategic Planning-Driven Initiatives
June 26, 2000

KEY CHALLENGES

The citizens of Minnesota elected Governor Ventura based on his ideas for changing government. The Ventura Administration has outlined the direction for change in a three word belief statement:

Accountable – Taking ownership for our decisions and reporting progress to customers.

Responsive – Finding out what our customers really want and making decisions based on their priorities while being creative at reconciling conflicting needs.

Limited - Making sure every dollar is wisely spent to create the most value possible for customers.

Mn/DOT believes that government in the 21st century must reward creativity, efficiency, and productivity and encourage competition.

The key challenge has been creating a “new type of management system” to create a “new type of government” based on these beliefs. Effectively integrating customer input into the agency’s decision making processes has been particularly challenging.

ACTIVITIES

The Minnesota Department of Transportation has responded by creating a management system referred to as the “Customer Responsive Management System”. The new system adapts private sector business practices to create a new public sector management system that integrates customer, cost, and timeliness information into decision making processes. At the leadership level, the executive team developed the following elements to serve as the strategic foundation for the new management system.

1) Strategic Objectives (Priorities for the Tinklenberg Administration)

Multimodal – To increase travel options for moving people and goods.

Interregional Corridors – To ensure that corridors of statewide significance link the state’s regional trade centers.

Program Delivery – To streamline the highway construction/maintenance program delivery process while improving quality and cost-effectiveness.

Information – To listen to our customers and respond with accurate, timely information upon which they can rely.

2) Business Definition – Mn/DOT’s business is to provide Transportation System Leadership, Management and Information.

3) Strategic Customer Segmentation

- Commuters
- Personal Travelers
- Farmers
- Emergency Vehicle Operators
- Carriers
- Shippers
- Intermodal

4) Strategic List of Customer Needs

- Safe Trip
- Time Predictable Trip
- Timely and Accurate Information
- Smooth Uninterrupted Trip
- Responsible with Resources

5) Strategic List of Products & Service Lines

- Transportation Investment, System Management, and Advocacy
- System Infrastructure
- Systems Operation
- Regulation
- Information

These strategic elements have been distributed to management for use in the Business Planning Process. Every Mn/DOT business unit created a business plan for the 2000-01 budget. The 42 business plans were summarized in division level plans and finally into a single Mn/DOT-wide Business Plan. The 2002-03 Business Planning process has just begun. These Business Plans will be used to allocate the 2002-03 budget based on the value being created to meet the customer needs as defined in the Business Plans. The Business Plans will be linked to detailed action plans that provide the basis for each employee's annual performance plans.

A Strategic Market Research Study was completed in May 2000. The results are being used to further refine the above strategic elements as well as being distributed to the business units for use in the completion of the 2002-03 Business Plans. This Strategic Market Research information offers insights concerning customer priorities and current level of satisfaction versus those priorities. With this information decisions can be made that increase the customer value created for the dollars invested in creating and delivering the products and services to the different customer segments.

Performance measurement is being applied at every level of the organization from the strategic objectives down to an individual performance plan. Mn/DOT Performance Targets were developed at the start of the 2002-2003 Business Plan development to give direction on actions and measures of success to meet those organization priorities.

Activity Based Costing and soon Activity Based Measurement will be used to develop costs estimates for various service levels and measure cost of delivering those service levels to meet customer needs.

Integral to the creation of accountable, responsive, and limited government is the need to manage communication internally at Mn/DOT and externally with customers (public) and stakeholders (legislature/counties/cities). Mn/DOTs "One Voice" strategy is designed to achieve focused communications with employees and value-added messages with customers and stakeholders.

LESSONS LEARNED

- 1) Efforts to create a new management system must be enthusiastically directed from executive leadership.
- 2) A clear focus for the new system must be communicated. (Strategic Objectives)
- 3) A simple framework must be used to help everyone understand how all the new pieces of the system work together.
- 4) Clear, detailed implementation plans are critical in ensuring the strategic decisions are carried out in the organization.
- 5) Each employee must clearly understand their role in the new system and individual performance planning must align with the organization's business plans.

RESEARCH NEEDED

What type of management system is working the most effectively at creating customer value

What performance measurement approaches are most effective

What type of market research approach works best

What type of communication approach works best with employees and with customers/stakeholders

MINNESOTA

CAO SESSION II: WORKFORCE & REORGANIZATION-DRIVEN INITIATIVES

Staffing:

- Core Competencies
- Strategic Staffing
- Succession Planning

Key Challenges:

- A. Continuous change is becoming a way of life both personally and professionally for employees as well as for the organization. How organizational leadership manages change is the key to engaging employees and keeping them committed.
- B. Organizational needs have shifted from valuing only technical abilities to integrating other attributes as well.
- C. Business Planning and the implementation of the plan should align resources to enhance organizational agility and our ability to embrace change.
- D. Linking strategic objectives with employee contributions focuses our efforts, but requires strong leaders at all levels throughout the organization.
- E. Staffing changes have come at a time when the labor market has tighten, compounding our efforts to recruit multi-skilled staff.

Activities:

- A. Core Competency: Seven Individual Competencies have been identified and defined. (Leadership, Learning & strategic systems thinking, quality management, organizational knowledge, technical knowledge, people management, Individual Characteristics: ethics & integrity, positive attitude & enthusiasm, interpersonal skills, accountability, decision making, communication skills, adaptability and flexibility, achievement orientation, impact & influence) These competencies describe how successful employees perform on the job and helps employees understand the actions or behaviors that are desired. They have been incorporated into all human resources functions and tools including: position descriptions, performance communication, career planning, succession planning, recruitment, and selection.
- B. Strategic Staffing: Implementation of the Transportation Specialist series is the product of combining three distinctly different, yet closely related classifications: the Highway Technical Series, Highway Maintenance Worker Series and Bridge Worker to help us deal with peaks and valleys in our work, allowing us to deploy resources when needed. All employees in the aforementioned classifications were converted to the new classification and development plans identified to target expanded skill needs. A strategic staffing model has also been developed and will be introduced as a means of conducting a formal gap analysis of the top professional Principal Engineer group in the year 2001.

- C. Succession Planning: Formal succession planning has been in operation since 1994. The model identifies the top leadership positions within the organization and provides a comprehensive assessment of those employees currently holding managerial status to be assessed for their readiness to fill these positions. This competency-based, developmentally-driven executive staffing model has directly influenced 21 senior executive management appointments since its inception.

Lessons Learned

Core Competencies

- A. Individual Competencies that support the Department's mission, vision and values help us communicate employee expectations that align behavior with organizational goals.
- B. Incorporating individual competencies in the ongoing performance management process and holding supervisors and managers accountable for providing regular feedback has kept us focused on meeting the organization's goals.

Strategic Staffing: Transportation Specialist Series

- A. Organizational barriers between Construction and Maintenance have been minimized as we change the way we assign work.
- B. Business Planning was the foundation to explain the need for this change and to drive workforce planning.
- C. Workforce planning clarified staffing needs (number of people and level of skill) to deliver programs.
- D. Skill development is vital to the success of this program. Simply providing training is not the answer; training needs to be based on meeting goals in the business plan.
- E. Multi-skilled employees have enhanced our workforce flexibility yet we also need deep technical skills (Civil engineering technician in some areas).
- F. Managers and supervisors have been required to think and operate differently for effective, efficient utilization of the workforce.
- G. Ongoing communication and feedback contributes to the success of the transition.

Succession Planning

- A. Succession planning provides leadership alignment with the department's strategic goals and objectives.
- B. A talent pool of successors is created to fill critical positions without unnecessary operational disruptions.
- C. From this effort we are able to identify internal talent and also reach outside for specific individuals to add to the team.
- D. A key to successful internal talent in this program is in the feedback and taking action on the development needs.

MINNESOTA

PROCESS AND PROGRAM DELIVERY

Competitive Excellence in the Program Delivery System

In Minnesota, the system by which roadway improvement projects are developed, designed, and constructed was initially identified in the 1920s. Legislation and professional influences, incrementally, introduced new methods, materials, technologies, and public concerns for social, economic and environmental impacts.

The modern day project development process was established and documented in the early 1970s. Since that time it has been subjected to increasing demands for more detailed information, enhanced permitting requirements, and added requirements as a result of additional federal and state legislation. As a result project delivery for minor projects can now take anywhere from 14 to 36 months, while major projects such as reconstruction projects and bridge replacements can take from 5 to 20 years. Studies, in the last three years, have looked at various methods to expedite certain types of projects or streamline parts of the system.

A strategic objective of the Department is “to streamline the highway construction program delivery process while improving time, quality and cost-effectiveness.

This challenge is being undertaken by addressing its three main elements 1) the project development process, 2) the right of way acquisition process, and 3) the construction management process. Cross cutting themes in each element focus on review and reform of policies, processes, tools, and training being employed in the Department. The objective connects and integrates a variety of projects being conducted in the Department with national efforts in environmental streamlining and current Regulatory reform.

Each of the efforts is charged to:

- Review, define, and implement process improvements that can be implemented administratively.

- Define and recommend policy and/or legislative changes needed to improve time, cost, and quality.
- Review and implement organizational changes and introduce technology and consultant changes that enhance staff productivity and reduce delivery costs.
- Identify and implement actions to restore and improve technical training and education programs.

The current projects underway to address these themes include:

- Design/Build benchmarking and implementation program.
- Cost Participation Policy review and reform.
- Consultant usage reform and process simplification.
- Computerized project tracking and scheduling system.
- Letting schedule reform and response to construction industry recommendations.
- Utility relocation simplification process.
- Piloting Context Sensitive Design principals and training.
- Utilizing the Interactive Highway Safety Design Model.
- Implementing end to end CADD design and construction plan updating systems.
- Development and implementation of a Construction Inspectors Academy.
- Implementation of a new Transportation Specialist Series of worker to achieve greater flexibility in the use of a highly unionized and specialized workforce.

MISSOURI

Strategic Planning – Driven Initiatives

Strategic Planning

Key Challenges

1. Employees don't really understand strategic planning, therefore, they tend to disregard it because they can't relate to it
2. Historically, strategic planning was an annual event that took place and the document was never really used as a vehicle to create the business plan
3. Measurements were not incorporated into the strategic plan; therefore, progress could not be measured nor captured
4. Senior management struggles with identifying corporate priorities

Activities

1. MoDOT has assigned staff to facilitate the strategic planning efforts
2. MoDOT has created a reporting mechanism so desired outcomes within the strategic plan can be measured
3. MoDOT has communicated the strategic plan to all employees

Lessons Learned

1. Strategic planning works and dedicating staff has elevated its importance within the agency
2. Employees know management is serious about measuring performance because of the implementation of a reporting document
3. Need to involve all levels of employees in the strategic planning process
4. Need to make sure the measurements identified within the strategic plan will in fact measure progress

Research Needed

1. Effective strategic planning model for DOTs
2. Linkage between strategic plans, business plans, and performance management plans

Customer Satisfaction

Key Challenges

1. Diversity of customers (general public, legislators, stakeholders, employees, etc.)
2. Customers want more than we could possibly finance
3. Customers have difficulty specifying or prioritizing what they want
4. Due to the massive numbers of our customers, finding the appropriate medium to reach our customers is difficult

Activities

1. MoDOT hired outside experts to complete a wide-ranging customer satisfaction survey
2. MoDOT implemented Customer Service Centers in each district and at the General Headquarters
3. MoDOT recently completed "road rallies" where customers were asked to comment regarding features of the highway as they experienced them
4. MoDOT has solicited input through several methods:
 - 1-800 phoneline
 - E-mail
 - Random customer survey calls
 - Public meetings
 - Letters
 - Newsletters and printed material
 - Town hall meetings

Lessons Learned

1. Random customer phone calls produced excellent data on statewide opinions
2. Public meetings help customers feel involved in the project selection process
3. Outside experts provide a new perspective on customer satisfaction and participation
4. Little customer satisfaction data is provided by customer service centers

Research Needed

1. What transportation issues are our customers concerned with
2. What is the best way to figure out what the public thinks of us
3. How can we get more people involved in the public input process
4. Once we obtain customer satisfaction data, how can we tell if we are improving in the right areas

MISSOURI

Workforce & Reorganization – Driven Initiatives

Workforce

Key Challenges

1. MoDOT is facing an increased work program. However, there are legislative limits set on the total employment levels.
2. There is a potential of massive early retirements due to new retirement legislation that passed in 1999
3. Shortage of graduate civil engineers and information technology recruits to replace many of those who will retire

Activities

1. MoDOT is on the threshold of expanding the role of its Employee Development programs and staff
2. MoDOT is developing a formal succession planning program for key positions

Lessons Learned

1. The old way of doing business regarding the management of a workforce will not be adequate to meet our work program needs for the future
2. Reliance on developing skill through learning by doing is not adequate
3. Unclear career ladders and the lack of an overall plan can hinder our workforce
4. Employees only trained to do one type of job assignment will not allow us to meet our workforce challenges

Research Needed

1. Recruiting strategies
2. Retention strategies
3. Development of criteria to help determine organization “right size” and “right mix” of staff and outsourcing

Reorganization

Key Challenges

1. Shifting to decentralization
2. Structural changes within the organization to enhance production
3. New top leadership (creation of a director position and a newly appointed director)
4. Getting the right people in the right positions

Activities

1. MoDOT is implementing a job study to determine the types of positions needed and the key skill sets to accomplish those positions
2. MoDOT has reorganized the general headquarters into five business units

Lessons Learned

1. Decentralization has worked in some capacities but has not been totally effective
2. Change is very difficult for most, so it is necessary to be embraced by "change agents"
3. Organizational change alone will not solve the problems. Good leadership and continuous process improvement must accompany the change.

Research Needed

1. What is the right organizational structure for a DOT
2. What is the perfect balance of decentralization/centralization

MISSOURI

Process & Program Delivery – Driven Initiatives

Contracting Routine Activities

Key Challenges

1. Buy-in from employees is difficult – they perceive this type of initiative as a threat
2. Cost comparison is difficult because we do not have an accurate calculation of overhead
3. These services are not readily available in all parts of the state
4. Performance standards need to be established

Activities

1. MoDOT had some success in outsourcing routine functions such as surveying, right-of-way appraisals, mowing and guardrail repair
2. MoDOT is looking for more candidate activities for outsourcing
3. MoDOT's Maintenance Operation Vision recommends outsourcing nearly all roadway functions

Lessons Learned

1. Outsourcing works
2. Need a standard or expectation for work whether done internally or outsourced

Research Needed

1. Need methodology for overhead calculation
2. Need performance standards for contracts
3. Is there truly a need to outsource more
4. Are we outsourcing the right activities

Incentive Based Contracts

Key Challenges

1. Developing the correct amount of the incentive
2. Getting contractors to pursue the work diligently
3. Ensuring quality work when a contractor is working under an intense timeframe

Activities

1. MoDOT has used incentive-disincentive contracts where traffic impact must be minimized
2. MoDOT has generally used incentive based contracts for large contracts in urban areas

Lessons Learned

1. It can work to our advantage if used and managed appropriately
2. It doesn't always provide the incentive we think it does (some contractors still go beyond the contract date)

Research Needed

1. Overall effect of incentive based contracts (do the benefits match the cost)
2. Clear definition of the best circumstances to utilize this type of contract

Moving from a 15-Year Project Specific Plan to a Policy Driven Long Range Transportation Plan and a 5-Year Project Specific Program

Key Challenges

1. Producing a program that could be awarded on time and within project budget
2. Producing a prioritization process to select projects
3. Buy-in from everyone that the projects are the right ones
4. Managing customer expectations of the differences between a project specific plan versus a long-range transportation plan

Activities

1. Developing a Long-Range Transportation Plan
2. Developed a strategic plan to set the direction
3. Adding new projects to the fifth year of the STIP
4. Identifying key issues within the project delivery process and solidifying those issues into one source of data

Lessons Learned

1. Estimates on a shorter time frame are more realistic
2. It is impossible to estimate the amount of money needed and the scope of projects 15 years into the future
3. Three percent project growth and inflation may not be enough for project cost increases
4. Needs must be identified from a Long-Range Transportation Plan
5. Don't promise what you can't deliver

Research Needed

1. What is the appropriate inflation factor and how do we keep it up-to-date pertaining to project growth
2. What is an ideal plan length
3. How do you deal with major projects that take longer than 7-12 years to build

Quality Assurance Policy for Project Estimates

Key Challenges

1. Producing a more accurate project estimate at the district level
2. Providing consistent review of the estimates in different districts
3. Administering the review in a timely manner

Activities

1. MoDOT reviewed all estimate files for completeness and accuracy
2. MoDOT developed a process for estimate files
3. MoDOT revised policies to produce more uniform files

Lessons Learned

1. The expectations of the review need to clearly be defined to the districts
2. Although the project estimates produced have become more accurate, accuracy must still be further improved

Research Needed

1. What would a standard estimating process look like
2. How can we create more accurate estimates, since underestimating the projects remains a problem

Montana Department of Transportation Challenges & Response Driven Initiatives

Prepared for
AASHTO CAO Workshop on
“Managing Change in State Departments of Transportation”



Strategic Planning-Driven Initiatives

1. Performance Programming Process

Challenge:

Re-engineer MDT's project nomination process to ensure:

- System performance is maximized, and
- strategic policy directions are addressed, and
- the predictability of the project mix in the construction program is improved.

Response:

- The “Performance Programming Process” was developed and institutionalized. This process maximizes performance of the system for ride quality, mobility, bridge and safety within a constrained funding environment. The process uses the modeling capabilities of the various management systems to predict performance based linked to funding scenarios. Decision-makers then use this analysis to develop a funding plan which guides project nominations annually. The process ensures key strategic initiatives are addressed and that MDT is accountable to its customers.

2. Biennial Customer Survey

Challenge:

- Ensure the MDT understands our customer's desires and the views of interest groups relative to those of the average citizen.
- Ensure that the long-term policy plan is still a valid direction relative to customer perceptions.

Response:

- A statistically valid random sample biennial survey to gather customer input for MDT's planning and program development was combined with a sector survey of special interest such as: commercial freight

haulers, local government officials, environmental interest groups, economic development groups, bike/ped, etc.

- The random customer responses are then compared with the response from special interest group input to better understand citizen's expectations and to appropriately balance planning and project decisions.

3. US-93 Bitterroot Valley Capacity Expansion Projects

Challenge:

- Increased traffic volumes on US 93 in Montana caused a significant need for capacity expansion to allow the facility to continue to operate safely and efficiently. Communities along this roadway are very active and have a high level of environmental concern for this sensitive area.

Response:

- MDT empowered local focus groups to participate in the design of the projects in their communities. Specific design elements the local groups contributed include bike/pedestrian facilities, traffic calming designs, beautification, and wildlife enhancements. Due to this process, involved citizens are now defending the Department and urging rapid implementation.

4. Systems Impact Process

Challenge:

- Private development poses specific problems for transportation infrastructure. Often, costly transportation facility improvements are needed due to traffic generated by specific new development. In addition, the proposed development may carry environmental consequences that must be addressed prior to permitting the action. While it is not fair to pass these costs to the public, it is also not fair for developers to disproportionately or arbitrarily be assessed costs.

Response:

- MDT developed the "System Impact Action Process" to address these issues. This process provides for a coordinated review of proposed developments which are deemed to have a significant impact on the adjacent transportation facilities. The review process determines the extent of the impact the development will have on the transportation facilities above background growth trends. Mitigations are then identified which the developer must take responsibility for prior to MDT issuing permits. In the instances where environmental issues exist, all MDT permits are held until all other permitting agencies have approved the project's environmental clearances.

Montana Department of Transportation Challenges & Response Driven Initiatives

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Workforce & Reorganization Driven Initiatives

1. Wage Constraints

Challenge:

- State budget constraints put MDT at a disadvantage when competing with other states in the region and the private sector for qualified staff.

Response:

- Pay exceptions from the Legislature’s approved pay matrix are given in instances where positions have remained vacant for extended periods of time. Also, critical technical staff positions have received pay exceptions to retain existing employees.
- Repercussions of these pay exceptions include morale issues for staff continuing to be paid at the normal rates.

2. Strategic Plan Update

Challenge:

- MDT’s leadership wants to ensure continuity in the program when our current Governor leaves office at the end of this term.
- Some work units were not addressing MDT’s policy goals in the work plans for their staff.

Response:

- A strategic management plan was undertaken. The process was designed to encourage continuity in the MDT’s core business functions.
- Status – The strategic plan is in the development stages. The plan will be completed this fall; unit work plans will be designed to reflect the policy goals.

Montana Department of Transportation Challenges & Response Driven Initiatives

**Prepared for
AASHTO CAO Workshop on
“Managing Change in State Departments of Transportation”**



Process & Program Delivery – Driven Initiatives (reengineering, outsourcing, etc)

1. Program Increase Under TEA-21

Challenge:

- As a result of TEA-21, Montana’s program increased 60% while we were between Legislative bienniums and could not hire additional staff. Additionally, we lost staff due to our extremely non-competitive wage rates.

Response:

- MDT pre-qualified consulting firms and moved a large number of projects to these consultants. (about 150 projects)
- Established interdisciplinary teams, including representatives of regulatory agencies to speed up the front-end definition of project scoping.
- Negotiated funding agreements with the Army Corps of Engineers and the U.S. Fish and Wildlife Service to pay for staff dedicated to review of MDT permits.
- Requested a performance audit through the Legislative Auditor on project delivery and have begun to implement its recommendations.
- Requested a peer review of our right-of-way acquisition practices and we will undertake implementing its recommendations once it is finalized.

Governmental organizations that rely on their original sanction for existence are at risk of passing the way of typewriters and carbon paper; they're around but who cares? The modern justification for being must be compelling. Today, every public sector entity is in competition with the private sector for its' survival, whether it knows it or not. .

To compete, every state Department of Transportation (sDoT) must understand its contemporary role and responsibilities. It must be able to clearly demonstrate its significance to the typical citizen and substantiate its relative (and hopefully improving) performance. This can only be done with a strategic plan that incorporates customer focus, determined leadership, employee support and performance measures.

The New Mexico State Highway and Transportation Department's (NMSHTD) involvement with strategic planning and performance measures has been meaningful and rewarding. The organization has been profoundly changed and improved by the process of identifying its' customers and measuring its' success in meeting those customer's expectations.

NMSHTD began the process of identifying customers, outcomes and performance indicators in October, 1995. The department implemented the Compass program in the Spring of 1996. The Compass represents the strategic direction of the organization, containing seventeen specific substantive products or services to be delivered to the customer, and 78 performance measures. NMSHTD now has over five years of data in most measurements that allow trend analysis.

The rewards of this effort have been many. Rather than attempting to be all things to all people, the Compass has permitted NMSHTD to concentrate its' resources on delivering tangible products and services to its' customers. As a result, deficient highway miles have declined 28%; pavement smoothness has improved 46%; traffic fatalities have declined 15% and congestion has been reduced 8%. Overall, public perception of the department has improved and legislative relations have become professional. In fact, a strategic plan with performance measures has served to deflect political pressure since poor decisions regarding staffing or resource expenditures will be reflected in declining performance results.

NMSHTD has learned from its' experience that performance measures are initially very threatening to many people within an organization. There was a general distrust of the intended use of the measures by some. Others questioned the value of the information relative to the effort of collecting it. It is interesting to note that today, sections not represented in the Compass with a measurement are vigorously lobbying to be included. This has occurred because resources have been allocated based on evidence of need or opportunity reflected in the performance measures.

NMSHTD has also learned that at the outset, measures should be chosen from existing data sources, if at all possible. This will allow prior year data to be collected for comparison and also will not cause an unacceptable workload for the measurement "driver". This may even require indirect or oblique measures in the beginning. An example of this was when NMSHTD used the number of staff hours expended picking up litter along the highway as one of the indicators of the level of maintenance of the right of way. NMSHTD recognized that this was a measure of

process or *output* rather than result or *outcome*, but accepted it because it was data already being gathered. When a new maintenance management system was being designed, it was changed to number of highway miles cleaned and tons of litter picked up. But, it is OK to start with something less than perfect. Just make the commitment to continuously improve the measures as well as the process.

Particularly difficult has been the establishment of benchmarks to compare NMSHTD's performance against. Of the 78 measures tracked, only 14 have a benchmark from either another state or national average. Few states publish their performance measures and when they do, it is difficult to determine if the data was collected in a similar fashion to NMSHTD.

NMSHTD has experimented, with a fair amount of success, in linking performance measures with budget allocations. This has not proven to be as easy as it would at first appear. Most budgets are organized by line function, not an interrelated performance measure.

TRB, AASHTO and FHWA could assist in the evolution of performance measures by facilitating the development of common benchmarks between the various states.

Strategic Planning Initiative New York State DOT

Initiative: *(description)*

Environmental Initiative - NYSDOT has an obligation and responsibility to protect, improve and enhance the environment of New York State. To meet this responsibility, our environmental initiative was developed to create a strong environmental ethic within the agency and to strengthen relationships with environmental agencies and groups. It has been recognized as a "Best Practice" by AASHTO.

Key Challenges: *(major obstacles faced in undertaking the initiative)*

1. The first challenge was to expand our thinking beyond just complying with environmental laws. Certainly we are interested in supporting a multi modal transportation system where transit and high speed rail play a role, and there are features we can design into our highway system to reduce emission levels and encourage higher automobile occupancy, but as the State's largest builder there was much more we could do for the environment.

Our initiative includes proactive work to: improve access to streams and parks, aesthetics, habitat improvement, stormwater management, wetland creation, context sensitive design, historic preservation, use of alternative fuels, and cooperative research.

2. Our second challenge was to build trust among environmental advocates. Their insights into existing problems and future needs are required for us to be effective in helping to establish a sound environment. We believe that in order to establish a partnership, we need to let our actions show the way.

Activities: *(steps taken and results to date)*

Department executives incorporated the phrase "environmentally sound" into our mission during a strategic planning retreat. A team of executives was charged with developing an approach which turned the concept into action. They helped define the breadth of what an environmental initiative should encompass, and recommended that each regional office and affected division develop an action plan with specific deliverables. Regions were also required to meet with their regional counterparts from the New York State Department of Environmental Conservation to select specific environmental enhancement actions.

Special features which could be added to capital projects were first identified. Actions to

consider ranged from the acquisition of scenic easements to wildlife habitat improvements. Within months, a joint meeting of all Regional Directors from NYSDOT and their Environmental Conservation Agency counterparts took place, with Executives from both agencies. This established a strong partnership for future dialog and activities.

Discussions between the two agencies are ongoing and others have been reached out to as NYSDOT continues to reconstruct highways with environmental features.

Lessons Learned: *(what has worked and what has not)*

Success depends on a strong commitment from the top. We were fortunate in that a commitment to the environment existed in both the Governor and our Commissioner.

By proactively constructing environmental enhancements as an inexpensive, routine part of normal work, we at NYSDOT have brought our culture into alignment with our personal beliefs. This in turn has redefined our relationship with environmental agencies and groups. As these groups have become partners instead of policemen, approval times have improved, better projects are being built faster, mitigation costs are down, and staff from both sides have a new sense of teamwork and pride. We are also finding that the process savings associated with partnerships with the environmental agencies are more than offsetting the cost of enhancements.

Research Needed: *(most important items that would be useful to have research on)*

Research maybe needed to identify specific environmental activities that fit well with DOT capabilities. Research should also focus on short and long-term benefits, including economic impact of these types of actions. It should document avoided costs and delays, and benefits to "our customers." In other words, does it really make a difference.

**Strategic Planning Initiative
New York State DOT**

Initiative: *(description)*

Key Result Areas - In setting a strategic direction for NYSDOT, it was recognized that core business activities will always receive appropriate attention. Other key areas, however, would not receive the attention needed without calling special attention to them. Stated as a result, so each functional unit within the Department is free to pursue the common goal in their unique way, these "Key Result Areas" are:

PUBLIC INVOLVEMENT - The Department will better meet customer needs and gain the public's trust by actively encouraging and fostering meaningful public communication and involvement in all our programs and projects.

ECONOMIC DEVELOPMENT - The Department will actively support existing and new economic development by managing its programs and assets in such a way that the transportation costs of doing business in New York State are reduced.

PUBLIC SECTOR PARTNERSHIPS - The Department will work with other Federal / State Agencies and Authorities and local government to reduce the cost of government at all levels by better coordinating the use of transportation related resources.

FUNDING FOR THE FUTURE - The Department will increase the use of innovative financing techniques in conjunction with legislated funding sources to provide a stable, multi-year financial plan for the State's transportation system.

CONTINUOUS IMPROVEMENT - The Department will continuously improve products and services and cut operating costs through the use of management and process improvement techniques.

Key Challenges: *(major obstacles faced in undertaking the initiative)*

The key challenge is to have managers integrate the advancement of each Key Result Area into daily decisions and actions. We need to avoid the tendency of managers to delegate what in fact is a culture change that cannot be delegated, and to have managers understand that there is no single "silver bullet" action they can take and then be done with their responsibility.

Measuring progress is also a challenge, since the nature of the initiative is a culture change and not the accomplishment of a single task.

Activities: *(steps taken and results to date)*

Department Executives established the Key Result Areas after considering the strengths and weaknesses of the organization, coupled with the consideration of future threats and opportunities facing the organization. Next, several teams of middle managers were assembled, one for each Key Result Area. The middle manager teams selected possible measures or indicators of success in each area. Quarterly reporting of best practices began, but has since been replaced by oral presentations by managers directly to Executive Management on adoption of best practices among the regional offices. These oral reports are by a main office function manager (e.g. Design, Real Estate, Equipment Management, etc.) and limited to a single Key Result Area per presentation. They cover how the functional counterparts in each regional office are doing in advancing the Key Result Area and what steps the main office functional group has taken to ensure best practices are adopted across regions.

Lessons Learned: *(what has worked and what has not)*

1. Culture change does not lend itself to quarterly reports. The change is too slow and subtle.
2. NYSDOT has several regional offices. Each would report on their best practices, but most would not review the reports of other regions to find new ideas. The press of daily operations was too hard to overcome.
3. Regional Directors oversee multiple functions, each of which can potentially contribute to any of the five Key Result Areas. Given the press of daily work and the geometric expansion of possible actions, even within a single regional office, a progress report by every functional group on every Key Result Area did not encourage in-depth discussion.
4. Oral reports of limited scope (i.e. one functional area, reporting on a single Key Result Area at a session), seem to be working. The limited scope ensures a substantive report is given.

Research Needed: *(most important items that would be useful to have research on)*

Research is needed on how to measure success and how to make these kind of things stick when management is not watching or changes (e.g. new elections) occur.

**Workforce Initiative
New York State DOT**

Initiative: *(description)*

Administrative / Clerical Support - This initiative is the review of the administrative and clerical demands placed on the Department to determine how they can best be addressed in today's smaller, but more computerized government environment.

Key Challenges: *(major obstacles faced in undertaking the initiative)*

1. The nature and amount of administrative work is changing as technology enters the work environment. It has been difficult to calculate the impact of technology when calculating staffing patterns and fill levels.
2. Administrative / clerical positions have been allowed to go unfilled without apparent consequence, but this may be due to engineers taking on administrative functions to fill the void.
3. There has been no concerted review of the skill sets needed by administrative / clerical staff in a more highly computerized environment and which skill sets are no longer needed.

Activities: *(steps taken and results to date)*

Work is in progress. To date, staffing patterns among NYSDOT regional offices have been inventoried. Private engineering firms and other public Departments of Transportation have been benchmarked to determine the ratio of administrative / clerical staff to engineering / technical staff and the level of computerization in the organizations. Data on current work load by function is being collected and a methodology for determining appropriate administrative / clerical staffing patterns and levels is being developed.

Lessons Learned: *(what has worked and what has not)*

It is difficult interviewing staff about current functions and work load requirements without raising false expectations that additional staff may be hired. Since interviewees may believe that relief through the hiring of additional staff is a possibility, answers given during interviews may purposely paint a worst case scenario. It is important to use more than one method to obtain work load data.

Managers may be reluctant to point out administrative / clerical work being performed by engineering / technical staff or work which is not getting accomplished due to limited administrative / clerical staffing.

In a unionized environment, it is vital to obtain the buy-in of the unions involved to help insure high participation in data collection.

Research Needed: *(most important items that would be useful to have research on)*

Research is needed on how to address several workforce needs. Study of administrative / clerical needs is only one problem. Government may not be prepared to pay competitive enough salaries to attract needed skills. We can expect to have problems finding and retaining staff with the skill sets needed by transportation departments as technology (Intelligent Transportation) enters the work place and is used to operate the transportation system. We are also seeing fewer people enter the workforce as civil engineers, a core skill required over the long term.

As DOTs address these issues, research is needed into best practices.

**Process / Program Initiative
New York State DOT**

Initiative: *(description)*

Smarter and Faster Construction This initiative examined the special challenges facing highway reconstruction in a congested urban corridor. Learning opportunities were sought, based on the collective experience of responsible staff and the review of a significant capital project after construction was completed.

Key Challenges: *(major obstacles faced in undertaking the initiative)*

Problems, especially on large urban rehabilitation projects, are extremely complex. There are engineering problems associated with very old and heavily used facilities. The demands for the continuous movement of high volumes of traffic is significant. The physical space in which to complete construction is often limited and the hours of the day when construction can take place may also be limited. There are no easy answers.

The key challenge is overcoming the tendency of staff see the problems as caused by someone else and beyond their control.

Activities: *(steps taken and results to date)*

In the case study examined, business leaders insisted on meeting with the Department to express their concern that reconstruction was taking too long. Financial incentives were added to the contract in order to speed completion. A special expeditor, who reported directly to the Commissioner of NYSDOT, was assigned to the project. In spite of major construction challenges, with this extra attention and financial incentive, the job was brought in earlier than expected and ahead of its published schedule.

Following the completion of the project, policy and program staff were interviewed and the history of the project reviewed to capture any lessons for future work.

Lessons Learned: *(what has worked and what has not)*

1. Incentives do accelerate construction but take money away from asphalt and concrete. For the project reviewed by this initiative, incentives were added during construction and the pace of construction was accelerated.
2. Projects are designed primarily for engineering integrity. Value Engineering Reviews of project designs help identify cost saving measures. Opportunities for time saving measures may occur as a result of Value Engineering, but this is not a primary focus. While financial incentives help ensure expedient construction, incentives have a cost and are not always used.

3. Public relations is a key component of the construction process. Citizens and the traveling public need to be consulted and kept aware of progress. When there will be long periods when progress with the construction will not be obvious to the public, communications becomes even more important.
4. It is difficult to anticipate the full extent of deterioration until construction begins, but techniques to do a better job are being developed and contingency planning is an option. This also points out the importance of preventative maintenance.

Research Needed: *(most important items it would be useful to have research on)*

- ◆ The methods used when setting a project's schedule need to be reviewed to ensure schedules are reasonable from both the contractor's and traveling public's perspective. This is especially true when the public is inconvenienced by the construction. A tighter schedule may reduce the need for financial incentives. What are the best practices among state DOTs?
- ◆ What can be done to speed construction when the public is inconvenienced?
 - incentives are one option, but when should they be used?
 - can standard designs help speed construction?
 - can new materials be use which will speed construction?
 - what is the best split of responsibilities between contractors and the state DOTs?What are the best practices among state DOTs?
- ◆ What can be done to better understand existing conditions and avoid unanticipated problems? What procedural steps can be used to better (faster) manage unanticipated problems when they do occur? What are the best practices among state DOTs?
- ◆ What are the best practices among state DOTs for public relations before, during and after a construction project? Do DOT staff on a construction site need special training that goes beyond their engineering capability? What are the best practices among state DOTs?
- ◆ Obviously there is a cost to financial incentives. The public and elected officials need to understand the trade-offs to using them. Transportation agencies could benefit from identification of best practices with these explanations or, if not available, conduct research into simple ways to explain these trade-offs.

MANAGING CHANGE IN STATE DEPARTMENTS OF TRANSPORTATION
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
CAO WORKSHOP
June 2000

1. STRATEGIC PLANNING INITIATIVES

a. Key Challenge Faced

- i. Refocusing decision making processes closer to the customer.

b. Activities Undertaken

- i. To deliver better customer service and help employees make the most of existing highway funding, the NDDOT produced a Strategic Business Plan in 1997. The plan was developed with input from a task force made up of NDDOT employees, facilitated by a consultant.

The entire plan was created to move the decision making process to the lowest level to serve our customers better. Even difficult organizational changes were designed to give employees much greater ability to follow and "own" a project from beginning to end.

The plan included several significant decentralizing activities including:

- The creation of two regional offices
- Moving some Human Resource activities to the Regions
- Assigning a portion of the design duties to the District offices

The Strategic Business Plan was also intended to develop the department into a more planning oriented agency. The plan directed each division to develop their own strategic business plan and also included business process reengineering throughout the department.

c. Lessons Learned

- i. When implementing a component of a new strategic business plan, a monitoring and evaluation process should be created so adjustments to the process can be evaluated objectively for necessary modifications. Ultimately the department discontinued the two region concept, but kept many of the decentralized processes generally intact. These decisions were somewhat difficult without an objective measuring concept.

As a DOT we must continuously evaluate the way we do things and we must be able to change to adapt to different situations.

d. Research Needed

- i. More research is needed in the area of performance expectations of customers, surveys, for example, and how to predict future trends that may require modification of roadway performance standards.

MANAGING CHANGE IN STATE DEPARTMENTS OF TRANSPORTATION
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
CAO WORKSHOP
June 2000

1. WORKFORCE AND REORGANIZATION INITIATIVES

a. Key Challenge Faced

- i. Increase employee satisfaction by making NDDOT the "Employer of Choice" by enhancing the organization's ability to attract and retain quality employees.

b. Activities Undertaken

- i. In 2000, the department hired a consultant to conduct an employee satisfaction survey called Project 2001. The consultant also conducted a comprehensive salary survey (in progress). A succession planning process and a mentoring program are scheduled for implementation in the near future under Project 2001 recommendations. To assess organizational health, the consultant initiated a Survey of Employee Satisfaction. The survey was sent to each employee and was designed to provide a measure of organizational satisfaction within ten environmental areas that directly impact employees' work: communication, compensation, employee advancement, equal opportunity, human resource administration, performance reviews, supervision, training, work conditions, and workplace ethics. Of the approximately 1,000 survey questionnaires distributed to current employees, 730 (73 percent) were returned.

Assessing the human resource delivery system was accomplished primarily through interviews with the staff of the Human Resources Division and by separately interviewing groups of managers and subordinate staff assigned to locations throughout the state. To determine the department's leadership development needs, the 102 departmental managers took part in a comprehensive managerial skills assessment tool known as *META 360*. This instrument provided insight into individual managers' strengths and revealed areas of developmental need as perceived by the individual's supervisor, subordinates, peers, and customers.

c. Lessons Learned

- i. A large number of employees expressed feelings that the predominant engineering culture within the department presumed that contributions of non-engineers to the department's mission were of less value.

The Employee Satisfaction Survey revealed significant need for entry-level supervisory training. Both supervisors and their subordinates expressed the belief that new supervisors are ill-prepared for the transition from that of being a competent technician (regardless of their trade) to that of planning and directing the activities of other employees.

Although there were a number of organizational leadership needs expressed through the *META 360* process, a significant value of that instrument was the insight that it provided to individual participants about their own strengths and developmental needs. The results of both assessment instruments provided guidance for proposing a meaningful approach to entry supervisor training and the design of a meaningful, sequentially-delivered leadership development program.

Some key recommendations of the survey assessments were:

- (1) In supervisory training, greater emphasis should be given to issues surrounding supervisor-subordinate communication regarding work performance, the conduct of performance interviews, the follow-up on discussions relating to poor work performance, and the supervisor's recommendations for improvement.
- (2) The department should perform a complete review of the performance evaluation process and develop a procedure and form which emphasizes the employee's career development in addition to past performance.
- (3) Tie specific training offerings directly into classification groupings through a training matrix process, so employees will have a more understandable vision of what management expects in employee development.
- (4) Develop a responsible staff succession planning program - a program whereby managers will be able to identify, mentor, and deliberately develop a pool of potential managers and leaders early in and throughout their careers.

d. Research Needed

- i. The NDDOT needs to identify and emulate successful succession planning and mentoring programs already in place in other states and similar state or federal agencies or organizations.

MANAGING CHANGE IN STATE DEPARTMENTS OF TRANSPORTATION
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
CAO WORKSHOP
June 2000

1. PROCESS AND PROGRAM DELIVERY

a. Key Challenge Faced

- i. Identify strategic direction of the state's roadway system.

b. Activities Undertaken

- i. Historically, roadway classifications were based on funding, intended service or a combination of funding and service. It is NDDOT's intent to:
 - (1) Develop a new roadway classification system that identifies a hierarchy of roads that considers different levels of performance to better serve the needs of the public with existing resources.
 - (2) Develop supporting standards that can be used to measure the system's service and physical performance deficiencies.
 - (3) Develop a supporting method of project selection (investment strategy) based upon work types, leading to a better distribution of projects and more miles of high quality roadway for the public. This activity is currently being undertaken.

c. Lessons Learned

- i. One of the main lessons being learned as we continue with this process is that communication is the biggest challenge. The primary problem is in the logistics of gathering groups together for discussion and the time line that is required to do that interaction.

d. Research Needed

- i. Research is needed as to what the current performance demands are on North Dakota's roadway system as well as predicting future demands.

OKLAHOMA

AASHTO CAO WORKSHOP

"MANAGING CHANGE IN STATE DEPARTMENTS OF TRANSPORTATION"

JUNE 25-27, 2000

MINNEAPOLIS

Strategic initiatives at ODOT include:

1. Reorganization of its preconstruction activities from "functionally" managed design specialties to a "program management" system of control
2. Privatization of comprehensive routine maintenance functions
3. Introduction of performance measurements
4. Focus on CUSTOMER needs and expectations as criteria for measuring performance
5. Decentralization of some preconstruction activities to the field divisions
6. Combining the Directorship of the ODOT and the Oklahoma Transportation (formerly Turnpike) Authority

I came back to ODOT after a four-year absence to a program that had reduce its level of financial effort by 20% and the reduction of the employment base from 3200 FTE to 2750 FTE. Since ODOT's highway system was suffering from inadequate capacity and deferred maintenance, our first objective was to secure better financing through the legislature and federal sources. This imperative was a substitute for a strategic plan and drove all other considerations.

We were successful in securing a billion-dollar, five-year capital improvement fund in Spring 1997 and were immediately faced with the challenge of delivering the work on an accelerated schedule. Since this new work approximately doubled our preconstruction demand for five years, we made a decision to outsource both engineering and program management, reversing a tradition at ODOT.

ODOT is essentially a bifurcated organization in which the preconstruction activities are centralized in Oklahoma City, and the construction administration and maintenance is organized and administered on a geographic basis in eight field divisions. We decided to move the project management from the central office to the field divisions to expedite the schedule and remove the management from the environment of the central office which is organized around functional divisions for preconstruction activities such as environmental clearance, surveys, design, right-of way acquisition, etc. The result of this change from centralized and functionally oriented plan development was the expeditious completion of preconstruction work on schedule and within budget.

The success of this experiment has led us to the conclusion that we should reorganize our federally-funded five-year construction program to give program management control over the schedule and budget for all projects, and subordinate the functional divisions to this control. We are only in the initial phase of this reorganization, but we anticipate institutional inertia in its implementation.

In order to facilitate this reorganization and the privatization of comprehensive maintenance on a selected geographic basis, we are developing performance measurements related to customer satisfaction. This has been somewhat problematical since the predisposition of our managers is to measure "inputs" rather than "outputs" in terms of the customer's expectations. An example of this predisposition occurred when we developed a vision statement for the Department (influenced by the Department's managers), and the result was an internally directed vision instead of one focused on our customer's needs and expectations such as improved safety, reduced traffic delays and expedited construction processes.

In addition to the internal reorganization, we are making a purposeful effort to integrate the planning, administrative functions and operational activities of ODOT with the Oklahoma Turnpike Authority, recently renamed the "Oklahoma Transportation Authority." This initiative was the result of a Governor's performance study completed in 1995 suggesting that the two highway agencies should be combined. The first step in this direction has been the combining of the Directorship of both agencies under a single leader. This has resulted in a unified planning effort and the consolidation of some staff functions. There has been a reluctance of both agencies to combine due to longstanding turf issues and funding disparities.

ODOT's strategic planning has been more a result of reaction to opportunities and problems than proactive planning, but I believe we are stumbling along in the right direction and learning from our mistakes as well as our successes in providing transportation services with more efficiency and efficacy.

PENNSYLVANIA

CAO Workshop on Managing Change in State Departments of Transportation CAO SESSION I: STRATEGIC PLANNING-DRIVEN INITIATIVES Priority Setting Process

INITIATIVE: Reinvigorate PennDOT's Strategic Planning (SP)

KEY CHALLENGES:

1. Review and revise SP practices in conjunction with PennDOT's Baldrige initiative.
2. Build upon effective practices developed over the past 20 years.
3. Establish a commitment to and time for more rigorous planning
4. Integrate top-down and bottom-up approaches to create a shared vision of strategic direction.
5. Develop a new 4-year strategic agenda with linkage to annual business plans

ACTIVITIES:

1. Identified PennDOT's SP strengths and weaknesses (gap analysis).
2. Adopted new SP principles for a 2-year gap closure effort.
3. Assigned top leadership as the team that would pilot the SP principles.
4. Developed a "working draft" of vision, mission, values, and strategic focus areas.
5. Conducted an external scan (customer focus groups and stakeholder interviews) to enrich existing data sources, to validate the "working draft," and to suggest specific strategies.
6. Conducted an internal scan (employee and partner/supplier focus groups) to enrich existing data sources, to validate the "working draft," and to suggest specific strategies.
7. Completed a strengths, weaknesses, opportunities, and threats (challenges) analysis.
8. Assigned technical teams to develop goals and objectives.
9. Conducted a mid-managers meeting to critique preliminary technical team work for refinement prior to leadership decision.
10. Documented final goals/objectives and overall process in a strategic agenda publication.

LESSONS LEARNED:

1. Adapt, don't adopt. (this same theme is discussed in an NPR best practices report that can be found at www.npr.gov/library/papers/bkgrd/balmeasure.html)
2. User involvement in design is a powerful means to adapt best practices, but this process is by nature time-consuming and "non-linear."
3. Be ever vigilant that creating a shared vision can be diverted by stovepipe management and personal agendas.
4. People on the front lines of production and customer service continually want to be assured that management theory will result in effective business practices.
5. There is never enough communication - particularly on the linkages between management initiatives.

RESEARCH NEEDED: (with particular emphasis on applications in State DOTs)

1. Proven or promising change management approaches and techniques.
2. Communications strategies associated with change management.
3. Successful Baldrige initiatives to improve strategic planning.
4. Periodic visioning updates (perhaps annually) by organizations such as AASHTO.
5. SP best practices.

CAO Workshop on Managing Change in State Departments of Transportation
CAO SESSION I: STRATEGIC PLANNING-DRIVEN INITIATIVES
Performance Measurement

INITIATIVE: Strengthen PennDOT's Performance Measurement (PM)

KEY CHALLENGES:

1. Select measures with targets that will:
 - make a difference to customers/stakeholders
 - drive behavior throughout PennDOT, and
 - be used for evaluation and decision making.
2. Change to a value over volume orientation in which leaders use exception reporting.
3. Build upon effective practices developed over the past 20 years.
4. Integrate top-down and bottom-up approaches to gain acceptance of PM changes.
5. Create a scorecard-driven strategic agenda.

ACTIVITIES:

1. Reviewed general PM literature as well as practices in other State DOTs.
2. Introduced concepts of scorecard (longer-range measures linked to the strategic agenda) and dashboard (shorter-term measures supporting the scorecard as well as operational business requirements).
3. Created a dashboard with monthly exception reporting for use by top leadership.
4. Presented a sample scorecard to establish expectations for measurable goals with targets.
5. Guided technical teams through scorecard methodology to formulate 13 pledges to customers.
6. Conducted a critique session with an internal cross-disciplinary team and an external team of PennDOT consultants.
7. Completed a resource allocation review so that targets would represent realistic stretch goals within fiscal and personnel capabilities.
8. Published scorecard documentation as part of PennDOT's strategic agenda.

LESSONS LEARNED:

1. The "fundamentals" of performance measurement are not common knowledge.
2. Many managers are reluctant to accept a hierarchy of measures in which their dashboard would be limited to a critical few measures to be reported on an exception basis.
3. There is a bias toward internally focused measures that reflect a control vs. partnering orientation.
4. Acceptance depends upon the ability to demonstrate that proposed measures are obtainable, timely, reliable, and consistent.
5. Acceptance can be greatly enhanced by a user-friendly reporting system.
6. Be ever vigilant to the differences between central office and field perspectives.

RESEARCH NEEDED: (with particular emphasis on applications in State DOTs)

1. Proven or promising PM approaches and techniques.
2. Successful Baldrige applications of performance measurement.
3. Linkages of PM to strategic planning.
4. PM best practices.

PENNSYLVANIA

WORKFORCE & REORGANIZATION

Key Challenges

In the last three years, PennDOT has been the recipient of a significant increase in revenue, with a corresponding increase in its design and construction activities. These positive benefits to the state and to the Department come at a time when Pennsylvania is experiencing a tight labor market, with a shortage of individuals holding technical and engineering skills. PennDOT's human resources systems have not kept pace with those of private industry, and recruitment and retention of skilled workers has become a great challenge.

Activities Undertaken

To meet these challenges, as well as to improve our operations, PennDOT has adapted the Malcolm Baldrige National Quality Award criteria. Category 5.0, Human Resources Development and Management, specifically addresses workforce and reorganization issues, such as work design, training, education, and development, and employee satisfaction and well-being.

5.1	WORK SYSTEMS	5.2	EMPLOYEE EDUCATION, TRAINING, AND DEVELOPMENT	5.3	EMPLOYEE WELL-BEING AND SATISFACTION
A.	Communications	I.	Career Development	L.	Wellness
B.	Agile Workforce	J.	Cross Training	M.	Communication of Employee Services
C.	Merit-based Compensation and COLA's	K.	Linking Education to Strategic Goals	N.	Measurement of Employee Morale
D.	Recognition Systems			O.	Family and Community-friendly Workplace
E.	Promotional Opportunities			P.	Workload Planning/Balancing
F.	Performance Issues			Q.	Facility Issues
G.	Hiring Process				
H.	Technology				

The Internal Customer Satisfaction (ICS) Team was established in December 1998 to recommend and implement changes to the Department's human resources systems in the areas listed above. Many of the proposed changes required the approval of outside organizations and/or statutory changes.

Parallel with the activities of the ICS Team, the Governor's Office of Administration (OA) sponsored roundtable discussions with the Personnel Office of each agency under the Governor's jurisdiction. This forum recommended improvements to the Commonwealth's personnel system within the confines of current statutes and labor agreements. Approved recommendations included:

- ◆ A revision to the management directive regarding out-service training to allow for training for future positions and to decentralize approvals for out-service training to agency heads;
- ◆ An incentive pay program for management employees;
- ◆ Improvements to streamline the Civil Service promotion without exam process;
- ◆ Decentralized classification authority for agency-specific classes;
- ◆ Removal of Civil Service classifications from the Senior Level Appointment process, along with an automation of the process.

Because of the limitations to stay within the bounds of current laws and labor agreements, PennDOT placed several initiatives on hold and plans to bring them forward as appropriate opportunities arise. The OA intends to sponsor a second series of roundtable discussions this year, providing another forum to address the Department's concerns in the personnel arena.

Since its inception, the ICS Team implemented many successful improvements to the Department's human resources systems:

- ◆ Through the creation of the Center for Performance Excellence, a new role for the Transportation University was developed, which includes managing employee development and linking education to strategic goals.
- ◆ A Recognition Systems Coordinator position was established to assist organizations in designing sound recognition practices.
- ◆ A Department-wide Well Program was established.
- ◆ A contract was established with Penn State University to develop a Morale Index.

Lessons Learned

Through the Baldrige process and the OA-sponsored roundtable discussions, PennDOT learned that addressing and closing its human resources gaps could not be accomplished without sweeping statutory or regulatory changes. Gap closure will occur through incremental improvements to the existing system and finding creative solutions within current personnel processes. The Department also learned of the value of partnering with the OA and other Commonwealth agencies.

Research Needed

PennDOT's internal customers have expressed a need for manpower planning and the ability to forecast of employment trends. Research is needed to anticipate changes in demographics, to understand the needs of employees from various groups, and to develop systems that match employee needs and abilities with operational requirements.

PENNSYLVANIA

CAO Workshop on "Managing Change in State Departments of Transportation"

June 25 – 27, 2000

Minneapolis, Minnesota

Session Name: Process and Program Delivery

Focus: Process Reengineering

Relate Your Department's Initiative to the Focus Area:

PennDOT has delivered an unprecedented \$1.3 billion construction program for the last two years. Prior to obtaining federal and state revenue increases, PennDOT's construction program averaged about \$730 million annually. Additionally, PennDOT also manages a \$290 million program in annual agreements with engineering design consultants to work with its own in-house design staff.

In order to meet the challenges of delivering an increased number of projects and spending more on construction than ever before, PennDOT reviewed the way it was currently doing business in design and construction. This review evaluated current design and construction policies and procedures. This led to a streamlining or reengineering of PennDOT's project delivery process.

Describe Your Department Initiative:

Faced with delivering an unprecedented level of spending and an ever-increasing number of projects, PennDOT reevaluated its entire design and construction process from project programming through opening of the transportation facility. More than 20 Business Process Review teams, each consisting of PennDOT employees, external customers, stakeholders and other partners examined opportunities and made recommendations for change.

This reevaluation led to the reengineering of several key processes such as consultant selection and agreements; consultant invoicing; bid package preparation; project portfolio management; work order processing; contractor evaluation and finalization.

Key Challenges

Delivering \$1.3 billion worth of construction projects is long on challenges.

Workforce Shortage:

PennDOT was and continues to be faced with the challenge of delivering on a record-breaking number of projects in spite of a shortage of skilled design and construction professionals both in-house and at the consultant level.

Customer Expectations:

Customers expect and no doubt deserve the highest level of service possible and do not want to be inconvenienced any longer than necessary. With this in mind, PennDOT is faced with both the delivery of projects to construction sooner and minimizing construction delays by working at night and during non-peak traffic hours.

Technology:

In order to close the gap between a shortage of professionals and an increasing level of service, PennDOT was challenged to implement a system that uses technology rather than human intervention to advance projects through project-delivery process. Knowledge-based expert systems like expert hydrology and hydraulics' systems where permit approvals among all resource agencies are accomplished simultaneously online.

Activities:

To address the needs of a very diverse workforce, PennDOT has launched a Transportation University that not only address the requirements of this workforce, but also focuses attention on recruitment, retaining employees and recognition of employee efforts. A unique component of the Transportation University is that not only does it serve the needs of PennDOT employees, it also addresses the needs of our partners in the consultant and contractor communities.

To address customer needs we are implementing innovative contracting procedures that not only encourage contractors to complete their work on-time, but also in some cases we are starting to place warranty restrictions that force the contractor to stand behind their work for a certain amount of time.

In an effort work smarter and faster, PennDOT is developing a number of state-of-the-art computer systems. These systems enhance project delivery and open electronic doors via the Internet with our partners. Some of these systems include the Engineering and Construction Management System (ECMS), which will expedite project delivery using e-commerce; various Expert Systems that guide less-experienced employees through certain engineering processes and the Electronic Document Management System (EDMS) that allows for the electronic storage, routing and retrieval of project documents among PennDOT and other state departments involved.

Lessons Learned:

Throughout this process we have learned many valuable lessons. One of which is to survey our customers not only about how we are doing but what they expect from their state transportation agency. We have learned that our partners and customers both need to be involved in these reengineering teams if they are to be successful.

We have also learned that by adopting technology into our everyday business, we can not only work smarter and faster, but also we can deliver a higher quality end product. Additionally, we have learned that to retain and attract new employees we must first of all listen to their concerns and expectations and deliver the best possible tools and practices to help them do a better job for our customers.

Research Needed:

Benchmarking various design and construction technologies among the states to find the best of the best.

Cost/Benefit analysis of major reengineering projects.

Internet system development risk reduction strategies.

Best recruitment processes.

PENNSYLVANIA

Process and Program Delivery

Key Challenge

PennDOT was faced with the challenge of expanding face-to-face and other forms of more personal delivery of driver and vehicle services to the public without increasing taxpayer costs. Before 1995, PennDOT's driver and vehicle services had traditionally been centralized in Harrisburg. Customers had limited options to obtain driver's licenses, vehicle registrations, etc. The major option the public had was to use the mail to send their requests to the department and wait to receive their products in the mail. This process could take weeks. A second option was to utilize one of the approximately 250 PennDOT authorized private messenger services. The messenger services are located throughout the state. Customers bring their requests to the messenger who later travels to Harrisburg to have the customers' requests processed and returns back to the home office where the customers can pick up their products. This option could reduce the turnaround time to a few days. Finally, the customers could personally come to Harrisburg and have their requests processed the same day. For most customers, waiting a few weeks for their product caused no hardship; however, for those who needed immediate response, or who wish to deal directly with a person, a service gap existed.

Activities

PennDOT's Safety Administration established a Partnering Division in 1995 to help meet the challenge of expanding customer access to driver and vehicle services. The Partnering Division's mission was to develop programs with the private sector that increase customer service and convenience, benefit the private partners and require no additional government facilities or personnel.

The Division's began by expanding the then fledgling "on-line messenger" program. In 1993, the department had begun a pilot program with two messenger services, giving them the ability to process driver and vehicle transactions themselves and generate products on-the-spot in their offices. Through a telecommunications connection to the department's main computer facility in Harrisburg, the messengers can data enter transactions using the department's driver licensing and vehicle registration systems and produce products (for example, registration cards) on printers in their offices. There are now about 140 on-line messengers.

The department supplies the messengers with product card stock for printing, metal license plates, expiration stickers for the plates and other materials. The department also makes its mainframe computer facilities available from 6:00 a.m. until 9:00 p.m. Monday through Friday, and from 6:00 a.m. until 5:00 p.m. on Saturdays. The department provides training for the messengers in the use of the department's driver and vehicle systems, processing procedures and department policies.

The messengers process transactions for the department, keep records of their activities and send the department the fees and the completed paperwork. At the current time, on-

line messengers are able to process most of the work that they previously took to Harrisburg.

Another project was to outsource the then department-run telephone answering center. Through cost/benefit analysis, it was determined that the private sector could operate a call center at a lower cost than the state, and answer more customer inquiries at the same time. The now privatized call center has also established a driver and vehicle services Internet web site and provides automated interactive applications where customers can make direct inquiries into the status of requests they sent to the department.

A third project, similar to the on-line messenger program, involved allowing a "third party" vendor to connect car dealerships to PennDOT's mainframe computer system and provide dealers the ability to process their customers' vehicle registration transactions and give the customers their registration credentials (registration card, plate and sticker) on-the-spot.

Lessons Learned

Since its inception, the Partnering Division has been enormously successful in accomplishing its mission. As of March 31, 2000, there were over 140 on-line messengers participating in the program. By the end of 2000, the number of on-line messengers is projected to reach 200 sites. During 1999, the on-line messengers processed approximately 1.2 million customer transactions. The privatized call center responded to approximately 3.4 million customer information requests in 1999, about 1.6 million more calls per year than before privatization. As of March 2000, approximately 400 dealerships and AAA offices were participating in the "third party" vendor program, serving 20,000 customers per month.

With the success of these programs came an additional challenge – the need for rigorous oversight of the private sector partners. As a result of auditing on-line messenger activity, two on-line messengers were terminated from the program for failure to meet quality performance standards. Two messengers were temporarily suspended from the program, one for one month and one for three months.

Research Needed

The department is currently in the process of renewing its contract for call center operations. Before a new request for proposals is issued, the department is conducting a benchmarking study of call center operations to identify best practices and to help shape the request for proposals.

Safety Administration is also developing a more efficient way for external partners to interact with the department's mainframe computer files.

Finally, Safety Administration is developing the capability for customers to renew their driver licenses and vehicle registrations over the Internet.

Strategic Planning – *South Carolina Department of Transportation*

Priority Setting Process

The South Carolina Department of Transportation (SCDOT) has a long tradition of providing services to citizens and taxpayers of South Carolina, dating back to the early part of this century when it was known as the Highway Department. In 1998, the SCDOT developed an ambitious series of goals and objectives. To serve the public better, SCDOT reviewed every part of its complex organization, from road construction and bridge maintenance, to accounting and employee training. From this review a mission, a vision, and values were established along with 8 major objectives for the entire department.

The mission of the department was to be simple and reciteable. The *mission* of the South Carolina Department of Transportation is to, “build and maintain roads and bridges, and to provide Mass Transit to the citizens of South Carolina.” Initially in 1998, the vision was to see how SCDOT compared at the end of 2002. The *visions* were broad enough to cover all areas of the department, yet the visions are realistic. The *Values* established are known as the RIGHT Team Concept. This is the acronym for Respectful and supportive of others, Integrity at all times, Good at what I do, Honest and fair in all my actions, and Teamwork through communication. Goals were set to improve eight major areas. Under these eight goals are multiple objectives, showing elements of the main goal and an estimated completion date.

Performance Measures

SCDOT has a working document that incorporates every facet of the Department of Transportation. Yearly, we review each and every goal and objective as a benchmark of what we have accomplished and determine what needs to be done. The Department is reprinting our revised Strategic Plan in the summer of 2000. These brochures will be given to each employee.

Our Commission has approved the Strategic Plan for the department and continues to be a vital link towards reaching our goals. Each employee realizes that they are stakeholders in this agency, and has pledged to be member of this team.

Two years have passed since the introduction of a Strategic Plan at DOT. Major new roads are on schedule to benefit motorist across South Carolina, with construction at record pace. New purchasing and accounting procedures are saving time and labor costs. Interstate improvements are underway in some of the state’s most congested areas. The Department is leveraging technology across the board to improve efficiency. Employees are proud to serve customers and have incentives to excel. We are proud of what we’ve done, but we are not slowing down.

Key Challenges Faced

SCDOT had four major challenges that needed to be addressed before adopting a Strategic Plan. ♦One of the biggest key challenges was to create a team out of many tribes. As an organization of 5300 employees, we had many tribal leaders. It was imperative that the “tribal leaders” were brought on board early to prepare the core for the Strategic Plan. ♦Another challenge for our Department was to lie to rest the old “Highway Department” and to establish the new “Department of Transportation.” ♦A trust relationship needed to be formed with the Executive Staff and employees. Up until 1997, there were many changes in top positions at the Department. Employees needed to know that as a group we were going to become a better department. ♦The last key challenge was the department’s perception toward customers. We needed to realize the importance of our customers and to be responsive to our customers’ needs.

Activities Undertaken

In 1997, the Department underwent a Performance Audit. The audit contained 62 specific recommendations for change to assist the agency in becoming more efficient and productive. The department recognized this an attempt to have a living plan and added thirty more recommendations. The Strategic Development Center of the National Guard was consulted by DOT to help mold our Strategic Plan. A series of meetings were held; one meeting with Senior Staff was held and the MBTI (Myers-Briggs) personality test was given; a second meeting was held to review the results of the testing. Other meetings and retreats were held to promote teamwork, instill leadership, and review issues in the agency.

Another series of team building exercises were used to create and develop parts of the Strategic Plan. It was also at this time that the "Highway Department" was laid to rest, and the new SCDOT came into existence. The **RIGHT** Team concept was also developed.

The Strategic Plan was formulated in the summer of 1998 with a mission, a vision, values, and goals. This plan was compiled into a brochure. Each of the agencies 5300 employees attended a one-day seminar on the Strategic Plan. Agency managers who had been involved in planning meetings hosted these seminars across the state. All employees were given a RIGHT Team pin to wear, which was a lapel pin representing that you had accepted the Strategic Plan. Each employee was also given the opportunity to sign a certificate with all the other members of their group stating that they would do their best to uphold the values of DOT. This was completely voluntarily, but was accepted by every employee that attended the seminar.

The strategic plan is reviewed and updated yearly. (We have partnered with FHWA on many projects, and have insured that our plan and theirs is complimentary.) The next revision to the original summer '98 Strategic Plan will be printed this summer (summer '00).

As a follow up to the Agency's Strategic Plan, each unit of the organization has developed a "business plan" to indicate what strategies it will employ to meet agency goals and objectives. We are in the process of tying the business plans to our budget process.

Lessons Learned

We have learned that the Strategic Plan is an ongoing process. It must be maintained and endorsed by all employees. Secondly, we have learned that communication of the plan to employees is best accomplished by the manager of their unit. The process of reviewing and discussing agency goals and objectives in the individual work unit is perhaps the most valuable part of the strategic planning process. Finally, we have learned that every employee must be able to see how he or she fits into the plan.

Research needed

Initially, research was needed to find a firm or group that could assist with the conception of our Strategic Plan. Another essential item to assist the Department in becoming more efficient is valid customer surveys. We were able to distinguish some of our needs based on customer reviews and surveys.

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
WORKFORCE AND REORGANIZATION-DRIVEN INITIATIVES
RECRUITMENT/RETENTION

The South Carolina Department of Transportation has recognized that the strength of the economy has led to increased difficulties in recruiting and retaining skilled employees. That factor, coupled with increasing workloads and the desires of our legislature and the public to limit governmental growth has caused us to reevaluate our approach to a problem that has always existed but now is more crucial than ever before.

To emphasize the importance of this issue, we adopted the following goal in our Strategic Plan:

"Improve employee skills, their work environment and develop opportunities."

Among the sub-goals of that objective we have concentrated our efforts in some of the following areas:

"Review employee compensation levels and make adjustments as necessary to ensure employees are properly compensated."

Recognizing that fair levels of compensation are essential to the recruitment and retention of a skilled workforce, SCDOT engaged in its most comprehensive salary survey ever. A total of 461 organizations were surveyed, including every state agency in South Carolina, every DOT in the Southeast, municipalities, county governments and private companies. The survey covered every classification in use at SCDOT.

The survey demonstrated that many of our employees, particularly those in lower pay ranges were not being compensated adequately. Using the information that was obtained, we were able to convince the State Office of Human Resources to approve special pay increases that impacted more than 2900 SCDOT employees, more than half of our workforce. In addition to these pay increases we had previously made certain adjustments in compensation levels to make it easier to recruit and retain employees in certain key positions. Although it is yet too early to measure the impact of these changes, we are certain that we have placed ourselves in a more competitive position in the marketplace.

"Provide each employee with functional and comfortable workspace or work station."

Believing that a pleasant work environment can be an additional factor to recruit and retain employees, SCDOT decided that it would upgrade the workplace of every employee in this agency. An ambitious five year Capital Improvement Plan was implemented in 1998 to replace and renovate antiquated structures, some of which were constructed in the 1920s and 1930s. To date, two District Engineering Headquarters have been completely renovated, and a building has been purchased to replace an antiquated structure that housed a District Headquarters staff.

In addition, the Central Headquarters building has undergone renovations that have impacted more than 75% of the employees in the building. The auditorium has been completely renovated and equipped with a state of the art sound and visual system. Numerous other upgrades are planned, and SCDOT is on schedule to provide every one of its employees with a comfortable work environment.

"Complete and adopt a recruiting program to attract
quality employees and ensure a diverse workforce."

SCDOT has been able to enhance its recruitment efforts even while holding the line on expenditures. The recruitment staff has enlisted a number of volunteers from all areas of the agency who participate in job fairs and campus recruitment. This team approach has enabled us to present an increased presence at such events and to handle increased numbers of applicant inquiries. We have also added a number of small promotional items, which are attractive to students, and have consequently seen greatly increased traffic at our displays.

We are also instituting programs with a number of school districts around the state which will expose many potential applicants to SCDOT job sites which will hopefully result in a greater number of applications received. These programs are aimed at high school students and entry level jobs, but we are also developing programs that offer additional internships to college engineering students.

Yet another program employed by SCDOT is the Urban Youth Corps Program in partnership with the Federal Highway Administration. This program is designed to expose young people to career opportunities in transportation. A summary of our involvement in this program is included as an attachment.

With regard to research needs, any information on targeting the types of individuals most attracted to careers in transportation would be of interest.

These are but some of the initiatives developed by our agency to ensure that we can attract and retain the types of employees we need to fulfill our agency mission.

SOUTH CAROLINA

AASHTO CAO Workshop on “Managing Change in State Departments of Transportation” – June 25 – 27, 2000 - Process and Program Delivery by SCDOT

General

South Carolina is the nation's 11th-forecasted growing state and has a population of 3.8 million, according to recent U.S. Census Bureau figures. To keep pace with such growth, South Carolina is expanding its road system in ambitious fashion with 200 projects underway across the state. Along our coast, new major new roads will help visitors travel to some of the nation's most popular beaches. Near the port city of Charleston and in the Upstate, interstate widening and interchange improvements will help accommodate booming growth and economic development. But the real story behind how the South Carolina Department of Transportation is accomplishing 27 years of road and bridge projects in just 7 years involves putting aside conventional ways of doing business. Innovative financing is how South Carolina overcame a last-place position for federal funds to launch an unprecedented \$5 billion road construction program making a reality of projects that were on wish lists as long as 30 years ago.

In order to complete 200 construction projects in seven years, 20 years under the agency's normal workload, SCDOT selected the assistance of Construction and Resource Managers, or CRMs. A CRM is a firm, or a group of firms, that have experience and expertise in highway/bridge design and construction. After a detailed evaluation process, the SCDOT Commission voted to ask the staff to negotiate a contract with two firms, Parsons Brinckerhoff/LPA, headquartered in New York with offices in Columbia, S.C and Fluor Daniel, headquartered in Greenville, S.C. The plan calls for the state to be divided approximately in half, with each firm assigned to one-half of the state.

The two CRMs will act as an extension of SCDOT, and both will report to SCDOT on the projects they have been assigned to help manage. The firms will serve as assistants to the SCDOT Program Managers, who will continue to oversee each and every project.

MPO and COG Project Acceleration Program

This program takes advantage of federal laws that allow future federal highway funds to be leveraged through the issuance of bonds to build current highway system improvements. Eight of ten Metropolitan Planning Organizations (MPOs) have partnered with SCDOT in this financing program to accelerate projects in these urban areas. Each MPO's program is structured around specific construction projects. These projects are prioritized and "locked in" from the beginning of the program in an initial feasible financing plan. Next, these projects are managed as one large program to help increase efficiency. Finishing the projects sooner and completing the scope of the entire project saves money in the long run by avoiding rising land costs in high-growth areas around urban cores, as well as, taking advantage of better of better construction prices from contractors.

The key part of this financing program is the issue of a series of State Highway Bonds to supplement current federal funds during the construction period to fund project costs. A portion of each MPO's future federal fund allotments, or guideshares, will be used for debt service on the bond issues. The initial financing plan has assumptions about project costs, inflation, future interest rates, availability of federal funds, project time schedules, etc. These variables are managed throughout the construction phase to balance the sources of funding with the uses of funding.

The dollar amount of bond issues is not fixed but there are two limiting elements of the program that are fixed:

1. The future amount of guideshares that can be pledged by the MPO for annual debt service on the bond issues is limited to a dollar amount that is no more than half of their 1997 guideshares.
2. Since bond issues will occur as needed during the construction period, the term of any bonds issued is limited. AH bond terms will be structured to be paid off by 2022.

So, the dollar amount of bonds that can be issued for each program depends on interest rates and the timing of the bond issues. Unlike traditional SCDOT projects, this program requires additional coordination and planning among the different areas of SCDOT and the MPO. It's important that projects are finished on time and within budget, because the size of the overall program construction budget is variable and adjustments to each individual project may be needed to keep the overall program in balance.

In addition to improving the road systems in urban areas, SCDOT is also aggressively improving the rural road system. Eight of ten Councils of Governments (COG) have partnered with SCDOT in a financing program to accelerate projects in rural areas. This program works in the same manner as the MPO Project Acceleration Program. Also, putting several smaller projects under a large umbrella program makes for increased efficiency and lower costs.

State Infrastructure Bank (SIB) Projects

Because of SCDOT's innovative financing successes, the U.S. Secretary of Transportation chose South Carolina as one of a handful of state infrastructure bank programs in the country.

The S.C. General Assembly created the SIB in 1997 and the bill was signed into law by the Governor on June 26, 1997. The SIB Bank was created to focus greater attention on larger transportation projects, thereby allowing SCDOT resources to be devoted to smaller, yet important, transportation projects. The corporate purpose of the Bank is to select and assist in financing major qualified projects by providing loans and other financial assistance to government units and private entities for constructing and improving highway and transportation facilities necessary for public purposes including economic development.

South Carolina has led the nation in use of its own State Infrastructure Bank. Since its inception, the SIB has approved financing and begun development of nearly \$2.35 billion in projects.

SCDOT Strategic Plan

The SCDOT has prepared this biannual Strategic Plan, which is a comprehensive report that documents the progress of the Program Acceleration portion of the Statewide Transportation Improvement Program (STIP). The Strategic Plan identifies the scope, schedule, and budget for the cost of each program and associated projects, and it outlines the proposed funding of each project and each program.

This system integrates the Strategic Planning needs and the Financial Management needs of the SCDOT, and was developed jointly by the respective Process Teams. The challenges of tracking and reporting project and program status, schedules, costs, and funding for almost 200 projects across a wide geographical area, and managed by three different organizations, was met by implementing an innovative solution.

The centralized, electronic data engine insures the consistency of the data and the reports. The internet connectivity of the system will allow for data entry by multiple Program Managers located anywhere in the state. The secure access by Program Managers and the required data approval by Program Development Managers prior to publication will insure the integrity of the data. In addition to these benefits, this powerful system will be able to feed the revamped SCDOT web site automatically with selected up to date information on each project and program. The technology used for the development of the system is up to date and is now the most broadly accepted standards for database development. Most importantly, the implementation of this system has the potential to significantly increase the productivity of the Strategic Planning and Financial Management process.

Conclusion

The early successes of the Statewide Transportation Improvement Program are the result of a dynamic private-public partnership between the SCDOT, the FHWA, both CRM's, COG's, MPO's, the State Infrastructure Bank, and a myriad of private consultants and the public at large. Innovative financing has led to an unprecedented construction program in South Carolina's history of transportation. From the complexities of bond funding to the approach of public/private partnerships, South Carolina is condensing 27 years of projects into seven years in order to meet the overwhelming transportation needs facing the state now and in the near future.

Session: Strategic Planning

TDOT's department-level strategic planning process began in 1996 although some components of the plan are from earlier work. The department's Mission Statement, for instance, was adopted in 1994. The plan is built around five goals that were selected by the department's Executive Leadership Team (ELT) with advice from the division heads:

- Goal #1 — Demonstrate that TDOT's employees are our most important resource and critical to our success.
- Goal #2 — Increase capacity and efficiency of current transportation infrastructure with full consideration of social and environmental issues.
- Goal #3 — Create a more effective and efficient, process-based organization.
- Goal #4 — Maximize safety of the state's transportation system.
- Goal #5 — Develop a needs-based, planned approach to transportation system development.

The department's strategic planning process now involves more than forty managers and supervisors working in teams to address each of the five Goals identified in the Strategic Plan. Most of the individuals that serve on the Goal Teams are assigned based on their position in the department's hierarchy. However, we also involve some of our promising young managers as team members, giving them a broad view of the department, exposure to policy issues, and experience in working with a multi-disciplinary team.

TDOT's strategic planning process is staffed by the Office of Strategic Planning which was established in 1998. This office, headed by a senior manager, leads and supports the ongoing planning process and serves as an "incubator" for new initiatives.

Key Challenges

The key challenges have all related to three interrelated factors. One is the resistance to change. We, like most DOTs, do not embrace change. The second is the lack of a clear, inspiring vision (e.g., a new Interstate highway system) to excite our people. The third is the notion that we can assign people, money, and other resources to "new" activities without giving up some previous activity. Our best people are stretched very thin, and we keep asking more of them. We need you on just one more team!

Activities

In spite of the challenges, each of the five Goal Teams has produced important results. The human resources team is working on a comprehensive training program for TDOT managers and supervisors as well as improvements in employee rewards and recognition. Another team initiated a study of "choke points" on the state's Interstate and NHS highways, including recommended improvements. Another team looked at "strategic budgeting" issues—preparing long-range revenue forecasts, estimating the costs to build all of the "committed" projects, and estimating the costs to maintain and operate the already built infrastructure and to continue current support programs.

The strategic planning *process* has been beneficial in several ways. The most obvious is by providing a forum for the participants to raise strategic questions and consider what the future may hold and the implications for TDOT. Another benefit is the involvement of some of our promising young managers as described above. Finally, another benefit is the existence of an informed group (Goal Team) to help the department address strategic issues when they arise. Increasingly, issues are referred to one of the teams for their review and recommendations.

Another of our strategic planning initiatives is the creation of an "Internet/Intranet Team" to develop an "E-Strategy" for TDOT. The team has ten regular members and several "support" staff. Members include engineers and management staff with a wide range of information technology experience. The team's charge includes preparing a five-year vision statement and then recommending specific actions necessary for the department to realize that vision. To begin its work, the team had a series of informational meetings to learn about current resources and plans within state government and to hear from "outside" experts, including state officials and e-business representatives.

TDOT is just beginning to tackle performance measures. Each of the five Goal Teams has adopted three policy-level performance measures. To facilitate the selection of these fifteen measures and to promote a consistent approach to performance measures throughout the department, our Office of Strategic Planning prepared "Guidelines for the Use of Performance Measures." The guidelines incorporate many of the concepts of the "Balanced Scorecard" or "Family of Measures."

Some units within the department use customer surveys to assess performance, but the department does not have a comprehensive, proactive approach to determining customer satisfaction or preferences. Several of the Goal Teams have wrestled with issues related to customer surveys, and a proposal has been made to create a special group with representatives from each of the five teams and from functional offices.

Lessons Learned

One lesson learned (again) is that the support (real, substantive support) of top managers and supervisors is extremely important. The support at those levels must extend beyond just support of the *concept* to real support for the use of resources and for giving priority to strategic activities. Too often, the individuals asked to work on strategic initiatives are also expected to continue all of their other duties and functions without any change in priorities.

Research Needed

TDOT could gain from more information on successful, practical implementation of change within DOTs, succession planning, successful techniques for determining customer satisfaction/preferences. We are also interested in the development of a set of Baldrige-like criteria or a "Management Practices Manual" specifically for DOT's, to allow constructive comparisons without the "rankings" sometimes used to compare the performance of DOTs.

WORKFORCE AND REORGANIZATION

Approximately six months ago, the Tennessee Department of Transportation (TDOT) restructured its headquarters senior staff to provide better reporting and accountability to the Commissioner's Office, the General Assembly and the general public. Since 1981, the Department had been divided into two bureaus for engineering purposes. The Bureaus were: 1. Planning and Development and; 2. Operations. In addition, eleven different administrative offices reported directly to the Commissioner of Transportation.

With two bureaus, the responsibility for engineering activities often overlapped. Areas such as utility relocation was a particular problem with headquarters personnel reporting to one bureau and field personnel another. For several years, personalities of the two bureau's directors clashed and as a result, division directors on both sides were put in awkward positions. With regard to administrative offices, they all basically reported to the Commissioner's office. With the overwhelming responsibilities of the Commissioner's Office, no one person could adequately monitor, much less direct, the activities of eleven offices; so in fact, they basically operated independently. In addition, with no administrative protection, the directors were often subject to change each time a new Governor assumed office.

In order to address this issue, TDOT restructured its staff in January of 2000. After researching the other fifty AASHTO organization charts and having discussions with several DOT CEO's, TDOT changed to the Chief Engineer and Chief of Administration concept.

With a Chief Engineer, all engineering related problems, whether developmental or operational, could be directed to one office. Assistant Chief Engineers were appointed for Planning, Design, and Operations. In addition, the Department's four regional offices were assigned to the Chief Engineer.

With regard to administration, six offices were placed under the Chief of Administration. These offices perform the majority of administrative functions for the Department, including Finance, Human Resources and Information Technology. In order to assure a permanent stable office for the future, Strategic Planning was also placed under the Chief of Administration. Five offices, Civil Rights, Internal Audit, Legal, Legislative and Public Affairs, remained directly under the Commissioner's control since they more often deal with him on a daily basis and also implement administration programs.

Although this operation has been in effect for only five months, it appears to be working well. On the positive side, two senior engineering staff positions were eliminated, thus streamlining accountability and decision making. Also, six administrative offices are directed by the Chief of Administration, creating a team approach instead of independent operation. On the negative side, there was some resentment from middle and upper management staff about the way the change was implemented. Some popular and skilled employees were required to change jobs to better utilize their expertise for the Department's overall good.

The key challenge for the future is to have our senior staff trained and in position to move up and assume these top positions when vacancies occur. As with all other state DOT's, TDOT has experienced a real brain drain over the past five to ten years as the personnel hired to build the interstate system have retired. Although we have hired over seventy new engineers over the past twenty-four months, we face a critical gap for experienced personnel with twenty to thirty years of experience. As a result, we are beginning to cross train several of our younger future leaders so that they will be able to assume highly responsible positions within the next five years.

In summary, we are continuing to monitor our recent changes in organization and to identify and train the future leaders of our Department.

PROCESS AND PROGRAM DELIVERY

In 1996, the Tennessee Department of Transportation began a re-engineering project to improve our project development process. We found that our cycle time for a major project, from beginning to closeout, averaged twelve (12) years. This time frame was unacceptable. With the help of Price Waterhouse Coopers, TDOT began a major initiative to reduce our cycle time from twelve (12) years to only five (5) years.

A task force of TDOT employees involved in project development was formed. This group surveyed all of the areas involved in project development and produced an "As-Is" model of how TDOT conducted business. What they found was that our process was basically the stovepipe approach where no one person or division took responsibility for the delivery of a project. They also found that many of our information technology systems were antiquated and obsolete.

A second group of TDOT employees took over at this point and proceeded to develop a "To-Be" model which would produce the desired result of developing and completing a major project within five years. One of the most important recommendations from this group was that TDOT go to the project manager/project team concept.

After visiting several other states using this concept, TDOT decided to implement it. The concept is that one project manager would be placed in charge of a project from beginning to end. He would have a project team assigned to him including representatives from Planning, Environmental, Roadway Design, Structures, Right-of-Way, Utility, Geo-Tech, Construction and Maintenance. This team would participate in the project from initial scoping to completion of construction. The project manager would serve as a focal point or scheduler of the project to assure that it was completed on time and within budget. Instead of the traditional way of completing one task and tossing the project over the wall to the next group, we now have one individual with a project team to follow it throughout.

In 1998, TDOT hired six project managers to begin this change, with six additional managers hired in early 2000. This group has gone through extensive training on how to develop projects using the team concept. Each manager was initially assigned four (4) or five (5) projects, each of which were in different stages of development. Project teams have been formed for each of the fifty-three (53) projects, and their work is being monitored closely. Ultimately, we believe these managers can be responsible for fifteen (15) to twenty (20) projects each. With an ultimate goal to have sixteen (16) managers, this would place around three-hundred (300) projects under their guidance. This number would cover the majority of major projects under development at any one time at TDOT.

Results, so far, are encouraging. Although there was initial resistance from some division heads over "turf issues", most now recognize the value of the project team. The one downside is that we have taken twelve (12) key people within our organization and have put them in charge of a new program. Four more will soon follow. This has left critical voids in some of our divisions. However, we feel the end result will be a much improved project development process.

OFFICE OF THE SECRETARY

TO: Jon Williams

FROM: Brian R. Searles, Secretary of Transportation

DATE: June 14, 2000

SUBJECT: Strategic Planning

Background: In 1994, a traditional large-scale strategic planning effort was conducted by approximately 60 VTrans staff, in addition to members of the executive staff. The resulting strategic plan was distributed in 1995, and contained 29 objectives for the , grouped into 8 overall goals. Following distribution of the plan, several committees were formed to implement and evaluate the findings of the plan.

One of the major findings of the 1995 strategic plan was the need for a project manager system for implementing capital construction projects. During 1996 and early 1997, the followed up with a detailed study of options for implementing this system and in July 1997 put the project manager system into place as part of a significant reorganization of several divisions.

Following the reorganization, a review committee was appointed to review the strategic plan status, identify next steps, and report back to the executive staff. This committee worked during the fall of 1997, and presented its deliberations to the executive staff in December, 1997. The review committee found that about half the various goals and objectives had been achieved, although perhaps not exactly in the way which had been envisioned several years before. In addition, a significant number of the remaining goals and objectives remained valid.

During 1998, the leadership held informal meetings to consider next steps. It was decided that the next round of strategic planning should involve the executive staff as the principal participants. There were a number of reasons for this: the previous round had involved buy-in from many employees but fewer of the executive staff; many of the issues identified in 1995 were still valid; there had been a large turnover in the membership of the executive staff since 1995; and team-building efforts among the executive staff members would be timely and appropriate.

This round culminated in two full-day workshops for the executive staff, in December 1998 and January 1999. These workshops resulted in a goal statement for the , with desired outcomes listed in four topic areas: work environment and culture; budget; collaboration/communication/public relations; and legislative relations. These goals were further discussed and refined in a subsequent meeting in November, 1999.

Currently, VTrans strategic planning centers around four key questions which were the outcome of the November, 1999, meeting. These questions are:

1. Are you satisfied that the transportation system in Vermont is safe?
2. Are you satisfied that the financial investment in Vermont's transportation system is paying off?
3. Are you satisfied that Vermont's transportation solutions respect the natural environment?
4. Are you satisfied with the length of time that it takes to get yourself and your goods to another place?

Challenges:

- Getting the line-level staff to have faith their concerns are being heard; getting the executive staff to see the value of devoting time to strategic planning; and keeping the big picture in view for all participants.
- Setting funding priorities has been difficult with a state legislature which is mostly unaware of federal funding priorities and requirements (and when aware, not always concerned).
- Finding meaningful performance measures for *outcomes* has been difficult, a challenge which continues.

Activities:

- See Background, above. A variety of activities have been tried, in the belief that a diversity of approach is healthy.

Lessons Learned:

- Simple, ongoing improvements to daily tasks are preferable to grandiose pronouncements and complex measurement schemes.
- A key task of leadership is to set the tone for a corporate culture that is open to change and (relatively) flexible compared to old-paradigm quasi-military organizational structures and styles.

Research Needed:

- Performance measures of all sorts, especially related to outcomes and especially in less tangible areas related to historic and environmental values and the relationship between transportation and land use.

OFFICE OF THE SECRETARY

TO: Jon Williams

FROM: Brian R. Searles, Secretary of Transportation

DATE: June 14, 2000

SUBJECT: Workforce & Reorganization-Driven Initiatives

1. Organizational Reconfiguration

Project Management System

In July of 1997, the agency implemented a project management system for handling projects. A project manager is now assigned to every capital project. The project manager has responsibility for the project from design through construction. Prior to this, responsibility changed hands as the project moved through the various phases. This resulted in a lack of continuity, slippage in budgets and schedules and no overall accountability.

There was initial fear that there would be inadequate staff to cover all of the projects. As part of implementing the system, we researched other states to determine how many projects could be handled per manager; we created new project manager positions with higher compensation to correspond to the increased responsibilities; we reviewed and prioritized projects with an eye to reducing the overall program size to a more realistic size (this is an ongoing effort); and we hired a consultant to conduct project manager training and develop procedures.

This has been a very successful initiative. The project managers have taken on ownership of their projects, and we are seeing less slippage in both schedules and budgets. There is now one person who knows the history of the project from beginning to end, which works well when dealing with the Legislature and municipalities.

Reorganization

In the last several years, the agency has undertaken several reorganization efforts.

The first effort was to create a Project Development Division which included all sections dealing directly with project responsibility from design to construction. In the past the Construction Section was part of a separate division with Maintenance. At the same time, all technical support units were put together in a Technical Services Division and Maintenance was created as a stand alone division.

The key challenges were in getting employee acceptance of the changes. Overall, this initiative has worked very well, and the divisions are functioning well as designed. The Maintenance Division has particularly done well as a stand alone division with a director responsible for its activities and has had less budget problems and has accomplished several new initiatives.

In July 1999, a second smaller reorganization was done when the Division of Rail and Aviation was abolished. A Rail Section was created within the Project Development Division since most of their work is in development and here they could benefit from the project management approach. Aviation was moved to the Maintenance Division as most of their work is with maintaining the current infrastructure.

The key challenges in this reorganization were both in gaining employee acceptance and in gaining acceptance from our partners outside the agency. The Rail and Aviation communities were very upset by the

changes and felt that these programs would be downgraded in importance under the reorganization. The agency held several meetings to explain the changes and to assure everyone that the programs were still considered very important. The budget was developed with separate appropriations for these programs, so it would be clear that they were still being funded as before.

What we have discovered in the 11 months since this was done was that Aviation functions very well as part of the Maintenance Division, but the Rail Program really needs to stand alone. At this time, Rail has been established as a separate division again and we are recruiting for a director.

2. Staffing

Recruitment

One of the biggest problems facing the agency at this time is filling our vacancies. With the low unemployment rate and the discrepancy in pay between the private and public sector, it has been difficult to attract and keep qualified employees. To address this problem, we have created a full time recruiter position. This position will work on the following initiatives:

- set up visits to local colleges and high schools for recruiting
- establish a presence at local job fairs and expos
- develop a web page with recruitment information
- develop an agency internship program
- put on an annual Career Day with local high schools
- participate in Groundhog Shadow Day activities with local high schools

The biggest challenge to instituting this initiative has been getting the staff on board. We now have the position in place and expect to increase our activities. In the past twelve months, we visited several schools, attended 4-5 job fairs and expos, held a Groundhog Shadow and Career Day. For the next year, we want to increase our activities at both the high school and college level, develop the internship program and work more with the school communities to promote our positions.

Reclassification

Part of our problem with recruitment has to do with compensation. In the past year, we contracted for a market factor study. The result of this study was a recommendation that the entire engineering and technical staff be reviewed for proper classification. It was felt that these positions had

not been reviewed as a whole since our current classification system was put in place in 1985 and needed a thorough review.

To implement this process we established a classification committee consisting of representatives from each division in the Agency of Transportation and staff from the Classification Division of the Department of Personnel. The intent is to review all job descriptions, rewritten by the staff for this purpose, review the current classifications and come up with new classifications as needed. They also plan to develop career paths which will allow employees to move up the ladder without the need for someone else to vacate a higher position or to move into management positions. This process began in early May and is scheduled for completion August 30, 2000.

The key challenges have been employee distrust that this process will yield any benefits, fear that changes associated with reclassification can hurt them in the long run (change in overtime status for example) and anger that they waited a long time for the market factor study and now are at square one again. Until the study is done, it is impossible to guess how successful the project will be.

OFFICE OF THE SECRETARY

TO: Jon Williams

FROM: Brian R. Searles, Secretary of Transportation

DATE: June 14, 2000

SUBJECT: Process and Program Delivery

Historic Bridge Agreement

The Vermont Agency of Transportation has reached an agreement with our State Historic Preservation Office (SHPO) on the disposition of all historic bridges in the state. This up front agreement on what will be done with each of the bridges (document & destroy, rehab for continued highway use, or rehab for bike/ped use) allows the agency to know going into a project what is to be done with the bridge. The towns are also aware of the status of their bridges so they do not expect more from the agency than can be permitted.

- **Key Challenges:** Developing a trust between the agency and the SHPO was the largest obstacle that needed to be overcome. The other challenge was to convince the SHPO that most of the older bridges on the state highway system would need to be replaced to accommodate current and future traffic, particularly the truck traffic.
- **Activities:** The agency has undertaken a review of every truss bridge, covered bridge and masonry arch bridge in the state. A report was generated on each bridge that detailed its existing condition, historic significance and capability to handle future traffic. As a result of these reports, each bridge was placed in one of the three categories listed above.
- **Lessons Learned:** What worked was agreeing to conduct a complete investigation up front, so we dealt with the issue in its entirety and they (SHPO) did not feel like we were taking the divide and conquer approach.
- **Research Needed:** We need clearer guidelines as to what is historic, how much can a structure be altered and still be historic and a national inventory of exactly how many historic structures we are preserving. The issue we face with covered bridges is that over time we are slowly replacing all of the wood, therefore, do we still have an historic structure?

Virginia Department of Transportation

Prepared for the AASHTO CAO Workshop on “Managing Change in State Departments of Transportation” June 25 – 27, 2000

Session I: Strategic Planning Driven Initiatives

Focus	Topic	Discussion Examples
Priority Setting Process	<ul style="list-style-type: none">• Strategic Planning• Definition of mission/objectives	<ul style="list-style-type: none">• See below
Performance Measurement	<ul style="list-style-type: none">• Quality Management• Performance monitoring• Stakeholder identification• External Accountability	<ul style="list-style-type: none">• See below

The Revision of VDOT's Strategic Plan as a Priority Setting Process

The Virginia Department of Transportation (VDOT) developed its strategic plan through a structured, consensus-based decision-making process that assisted the Department in setting priorities, aligning resources, and communicating strategic direction to all employees. In February 1999, VDOT began revising and updating its strategic plan, the third iteration of revisions since 1994. Due to anticipated environmental changes, this iteration required a substantial effort.

Key Challenges: Some of the key challenges associated with implementing this process were:

- Maintaining focus
- Communicating the changes to all levels of the organization, internally and externally
- Ensuring alignment of organizational units
- Linking the budget process to strategic planning, especially for organizational work units
- Identifying the appropriate organizational performance measure to include in individual performance plans

Activities: To revise the plan, VDOT established a Strategic Management Team comprised of senior managers. This team was charged with reviewing the existing plan and making recommendations for modifications. An external facilitator from PricewaterhouseCoopers assisted the team in developing draft materials for review and approval by the Executive Management Team (VDOT's Commissioner and Assistant Commissioners). Each of the strategic planning components was reviewed and modified, beginning with VDOT's strategic vision (see attached chart), continuing with the refinement of strategic assessment, and finishing with documentation of strategic commitments (goals, performance measures and strategies).

Major changes resulting from this process included a revised mission statement, which continued VDOT's commitment to provide outstanding customer service while building, maintaining and operating Virginia's surface transportation system. VDOT also revised and prioritized its key customers and identified critical issues that need to be addressed in order for the Agency to be successful over the next four to six years. These critical issues identified three new priority areas which were then converted into appropriate goals, performance measures and strategies.

In order to monitor performance, each of the now seven priority areas was assigned to a Strategic Outcome Area (SOA) that is championed by an executive level manager. As champion, each executive is responsible for guiding the implementation of changes made to the plan to ensure the achievement of VDOT's mission, including the establishment and reporting of statewide performance measures and the refinement of statewide strategies.

Each organizational unit (district or division) was required to develop its own plan, in alignment with agency-wide commitments, to provide for plan achievement accountability. Each unit was then required to incorporate its strategic commitments into its individual performance plan.

Due to VDOT's size (approximately 10,000 employees with a budget in excess of \$2 billion), this process has taken approximately a year and a half to complete.

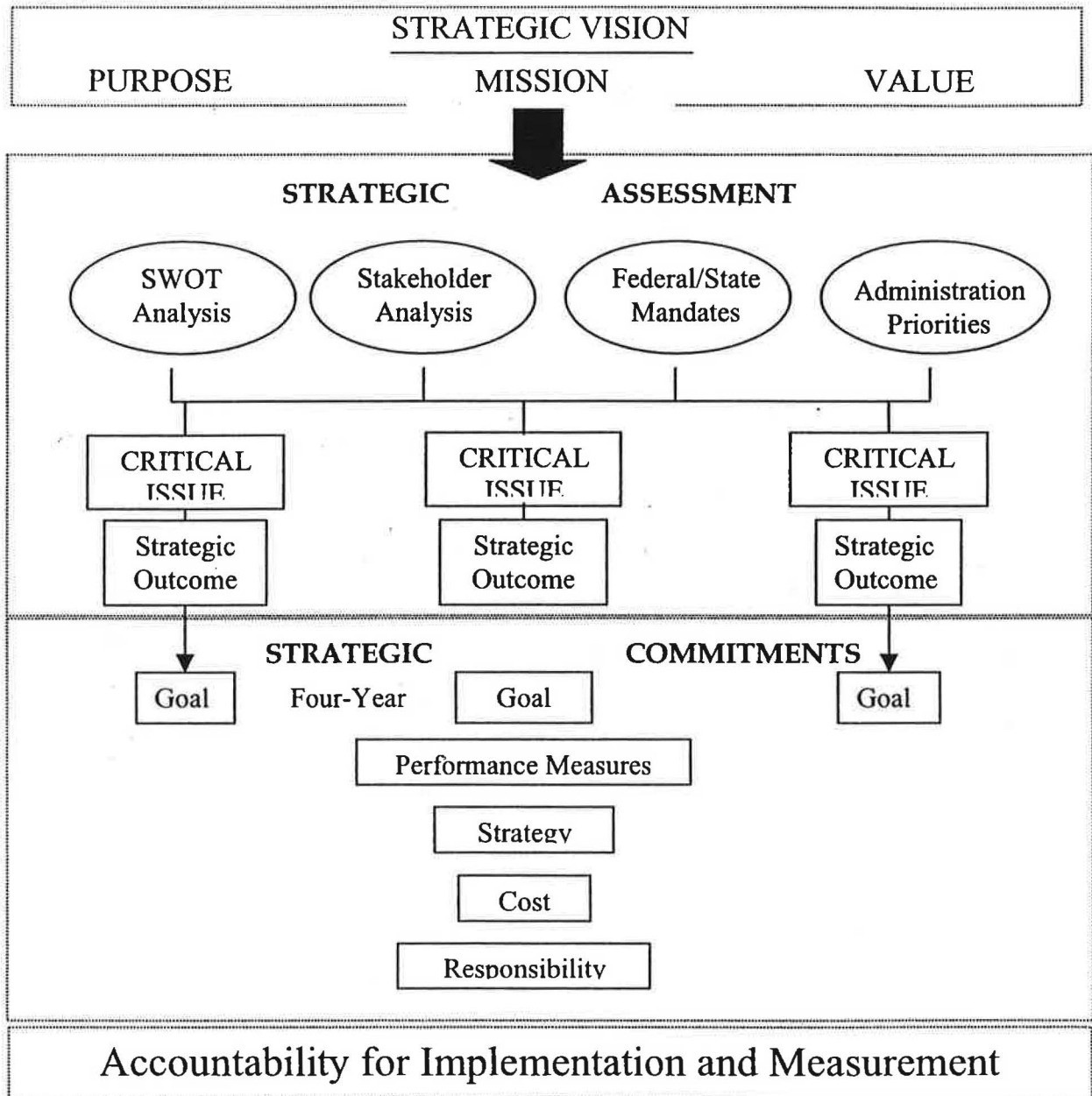
Lessons Learned:

- Develop a structure that can incorporate changes in priorities
- Maintain executive level support
- Dedicate the necessary time for developing draft documents
- Ensure timing of budget submission will follow the strategic planning process

Research Needed:

- Implementation of quantifiable performance measures
- Identification of the appropriate system support to provide and maintain data
- Establishing a link between our 20 year long range plan and our 4 to 6 year strategic plan

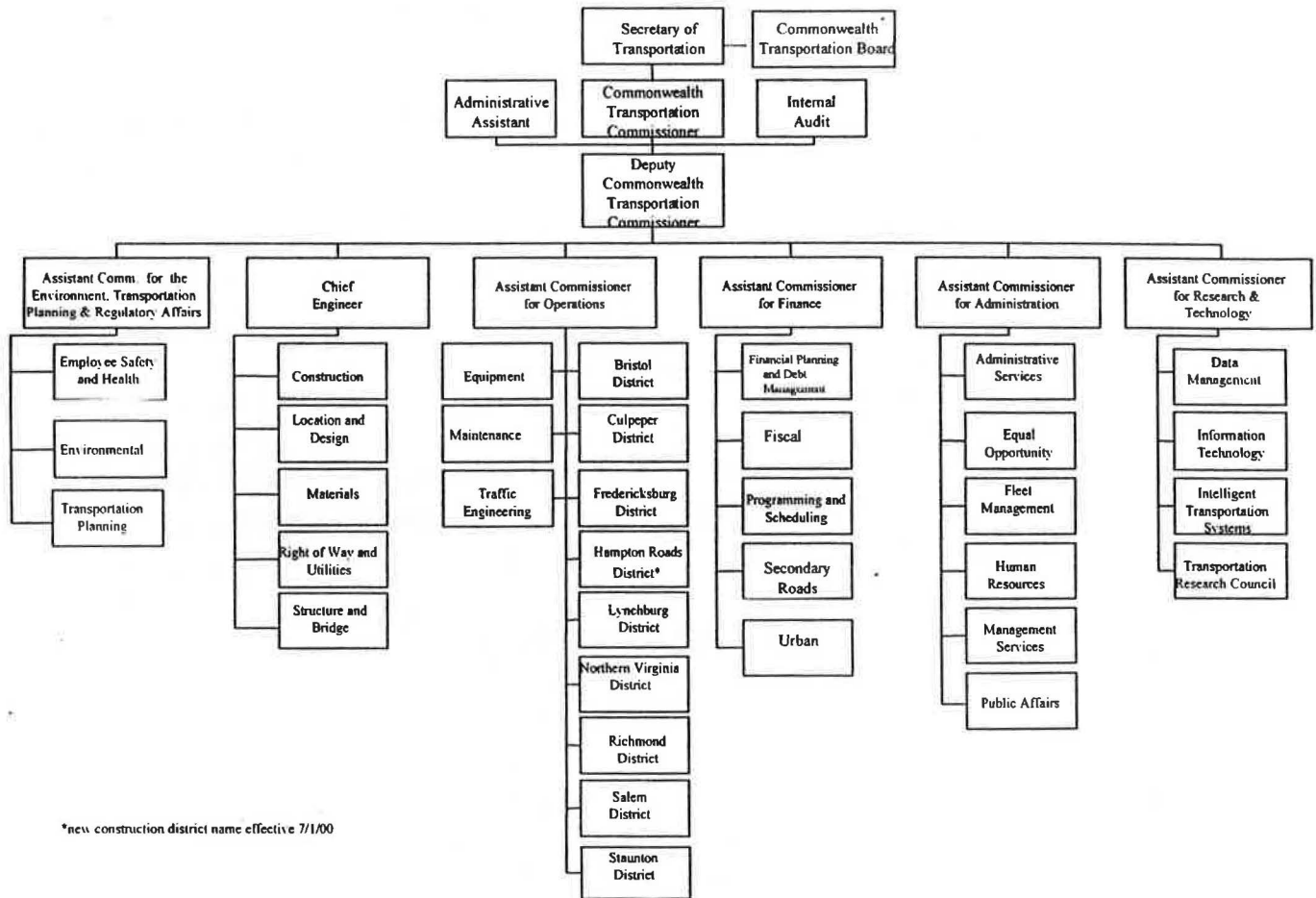
VDOT's Strategic Planning Elements
Attachment I



Attachment II

Virginia Department of Transportation

Organization Chart



Virginia Department of Transportation

Session II: Workforce & Reorganization Driven Initiatives

Focus	Topic	Discussion Examples
Organization/Reconfiguration	<ul style="list-style-type: none">• Decentralization• Project Focus	<ul style="list-style-type: none">• See below• See below
Staffing	<ul style="list-style-type: none">• Recruitment• Workload Planning	<ul style="list-style-type: none">• See below• See below

Decentralization

Key Challenges: The Virginia Department of Transportation (VDOT) has faced many challenges in recruiting for and filling vacant positions throughout the state. Factors that create difficulties in hiring include:

- An authorized workforce of 10,262 positions distributed among a Central Office and nine transportation districts
- A recently authorized increase above the 10,262 level by the Virginia's General Assembly at a time of low unemployment
- A centralized hiring process involved the following:
 - District Administrators and Central Office Division Administrators submitted electronic e-mail requests to VDOT's Executive Team members (Commissioner, Deputy Commissioner, six Assistant Commissioners)
 - Executive Team members reviewed requests for approval
 - A Central Office division tracked the requests, insured that requests did not exceed the distribution of authorized positions, and issued e-mail approvals to requestors

Activities: The Department delegated authority for hiring to its district and division administrators. This decentralization has reduced paperwork and accelerated the filling of positions to meet growing workload demands. Additionally, each district and division administrator is now accountable for insuring that VDOT employment levels remain within the total district/division number of authorized positions

Lessons Learned: Decentralization of hiring authority provides for compatibility of responsibility and authority, and saves paperwork and time.

Research Needed: Decentralization of the hiring process by other DOTs

Project Focus

Key Challenges: The workforce structure at VDOT has changed significantly in the last six to eight years due to a series of early retirement programs. An increased emphasis on project performance, with respect to cost and schedule, has influenced the way VDOT has historically managed projects. To this end, VDOT is adopting project management tools and techniques as a way to improve project performance.

Activities: VDOT has begun defining project management roles and responsibilities and institutionalizing project management practices. In 1999, VDOT created and staffed an internal Project Management Office to facilitate the integration of project management into the organization. VDOT is currently establishing a training/development curriculum for project management that provides training in project management principles and techniques. VDOT's commitment to project management is also noted in the Department's Strategic Plan for 2000-2002.

Lessons Learned: The Project Management Office is in the process of getting established and any lessons learned are still premature. The creation of the office has increased emphasis on project management

throughout the state. Many people have received training offered by the office and requests for additional training are being received.

Research Needed: The latest project management tools and techniques.

Recruitment

Key Challenges: Effective July 1, 2000 the Virginia General Assembly authorized an increase in the number of VDOT positions. This increase will create an immediate need to recruit and fill 400+ vacant positions. However, VDOT must compete with employers in the private sector, where significantly higher compensation packages are offered. Historically, VDOT has lacked the flexibility and financial resources to retain many of its most experienced and knowledgeable personnel, whose skills are necessary to help build future projects. VDOT's inability to offer competitive salaries has resulted in the following:

- Applicant pools have sometimes been small in size, or applicants did not adequately possess the needed skills
- Job offers made after interviews and at the upper end of position pay ranges have been refused
- Functional areas impacted:
 - Pre-construction/preliminary engineering areas: construction inspection, environmental, location and design, right of way and utilities, and structure and bridge
 - Other areas: field maintenance, management services, and special facilities such as toll roads and tunnels

Activities: A Compensation Reform System, effective November 2000, will combine, on average, three grades into one compensation band. The new system is designed to allow managers the flexibility of offering salaries at varying levels in the bands. Employees already on board could receive salary increases up to a cap of 10% based on annual performance. The effects the new system will have on recruitment will not be known for at least one year, or possibly longer.

Lessons Learned: Salaries that are competitive with private industry are needed to adequately attract and maintain an in-house work force.

Research Needed: More market research and compensation review of comparable VDOT jobs is needed to plan for and ensure that a competitively compensated workforce is in place for future workload.

Workload Planning

Key Challenges: VDOT currently utilizes a Workload Planning System (WPS) to forecast staffing requirements at various workload levels. Annually, staff levels are adjusted based on the outcomes of this system. The challenges that VDOT faces with WPS range from political issues to grass root level buy-in concerns. The statewide system, based on workload indicators, time requirements and expected volumes, is updated throughout the organization each year by teams of employees representing over 30 major functions. Widespread teamwork and excellent facilitation skills are required.

Activities: The annual WPS process includes the confirmation and verification of all team data across the state. The data consists of key indicators (tasks performed), staffing guides, and confirmation summaries containing requested full time equivalent staff. Once this is complete, a panel of managers reviews the information and submits a recommendation to the Executive Team.

Lessons Learned: Forecasting tools of this nature can be highly involved and complex during the implementation phase. Some of the lessons from the past for this project have resulted in flexibility with scheduling, setting up processes to validate data, and developing strong relationships with the field staff.

Research Needed: Research in the latest forecasting tools and techniques in order to improve the current process.

Virginia Department of Transportation

Session III: Process & Program Delivery Driven Initiatives

Focus	Topic	Discussion Examples
Process Reengineering	<ul style="list-style-type: none">• BPR	<ul style="list-style-type: none">• See below
Program Delivery Modifications	<ul style="list-style-type: none">• Innovative Contracting• Outsourcing• Privatization	<ul style="list-style-type: none">• See below

Business Process Reengineering

Key Challenges: At any given time, transportation improvement projects costing several hundred million dollars are being planned, designed, and constructed by thousands of VDOT employees. Their efforts to “Keep Virginia Moving” are supported by hundreds of construction contractors, engineering firms, and other businesses that employ additional thousands of Virginians. These businesses and the traveling public depend on VDOT to continue to effectively and efficiently meet its project development and construction commitments.

Activities: In response to the challenge of providing a higher level of service while simultaneously facing growing demand, VDOT has chosen to seek additional opportunities for increasing service responsiveness and staff productivity by redesigning the way many things are done by the Department. To accomplish this objective, a business process reengineering review was initiated to determine areas for improvement and prioritize the resulting opportunities to enhance VDOT’s mission for increased customer service and efficiency. Three areas chosen for their redesign opportunities were VDOT’s planning, design, and construction processes.

Lessons Learned: Complexity of projects has increased while availability of in-house resources has decreased. The Department must take steps to redesign its processes for the current organization size, optimize its use of both in-house and contractual resources, and manage those factors that threaten timely, cost-effective project development and construction.

Research Needed: Information on how other DOTs may use “Fast-Track” methods to expedite project development processes.

Innovative Contracting/ Outsourcing/ Privatization

Make-Buy Outsourcing Analysis

Key Challenges: VDOT is currently performing Make-Buy comparisons in the Preliminary Engineering areas. The analyses compares the cost of performing design work in-house versus outsourcing the work to design consultants. The most challenging aspect of this project will be to find the correct balance or mix of resources to assure that specialty design services are satisfied as well as retaining and hiring qualified in-house staff.

Activities: Current Make-Buy analysis activities include the completion of a study comparing several different projects. Future analyses will involve the comparison of preliminary engineering design projects as they are contracted.

Lessons Learned: Because the Make-Buy Study has not officially been released, reporting on lessons learned would be premature at this time.

Research Needed: VDOT plans to research various applications for Make-Buy analysis internally. In addition, the VDOT Transportation Research Council continually updates its libraries with various information related to Make-Buy analyses.

Privatization of Warehousing Services (NAPA)

Key Challenges: VDOT is currently piloting privatization of its warehousing services. On October 2, 1995 NAPA began the pilot program which included providing the manpower and management necessary to provide an on-site turn-key repair parts operation and procure, deliver, and warehouse all inventory that was previously provided through VDOT's Central Warehouse. The initial phase of the pilot was conducted in one district at seven locations, the Division of Fleet Management, and VDOT's Equipment Division. The pilot program was eventually expanded to two additional districts for additional analyses through August 31, 2000.

Some of the key challenges associated with implementing the pilot are:

- Transition of operations from VDOT Central Warehouse control to NAPA
- Identifying indirect impact on functions and processes
- NAPA's learning curve for VDOT operations
- Vendor's hesitation on full commitment due to pilot status

Activities: In order to ensure consistent implementation among the pilot locations, the Department created an internal transition team that coordinated operational efforts between staff and NAPA. VDOT also utilized a steering committee during the initial pilot phase to provide guidance to the pilot locations on matters of policy and intent of the contract. VDOT established performance criteria to measure the effectiveness of the pilot program and, after a review of the pilot's first phase, extended the project to two additional districts. The major objective for expansion of the pilot program is to determine if the cost of goods to VDOT will decrease with increased volume purchases.

Lessons Learned:

- Need to address/clarify contract language.
- NAPA cannot compete with the price of goods offered through Central Warehouse due to the volume of VDOT usage in a single pilot district
- Pilot must be a cooperative effort between VDOT and NAPA
- Little knowledge transfer between districts during expansion and transition

Research Needed: Quantitative models for evaluating privatization initiatives

WISCONSIN DEPARTMENT OF TRANSPORTATION

Experience with managing change

AASHTO / TRB workshop, June 25-27, 2000

Session name: Strategic Planning

Identifying the need

The Wisconsin Department of Transportation (WisDOT) undertook an extensive effort to examine and update the department's Strategic Plan in 1999.

WisDOT's Board of Directors, comprised of the top managers from the six department divisions and Executive Office directors, understood that strategic planning outlines a path for the department to attain a mission and vision. However, the last strategic planning process took place in 1997, and the Board of Directors wanted to engage segments representing the whole organization to develop an updated Strategic Plan.

Taking action through the Strategic Change Event

In August of 1999, the Board invited 260 WisDOT employees (out of over 4,000) to participate in a "Strategic Change Event." The chosen employees represented a cross-section of the department, including a representation from divisions, staff/management levels, and geographic areas from around the state.

The purpose of the meeting was to create a shared view of WisDOT's purpose that inspired teamwork, collective leadership, and commitment within the department, and to department customers, in order to achieve excellence. There were three key objectives for the event:

- (1) To understand environmental trends and WisDOT's stakeholders' needs;
- (2) To develop the organizational actions to move forward; and
- (3) To identify ways to communicate the work of this meeting with those who did not attend

The three-day event featured a "max-mix" format to encourage interaction between diverse staff and included many opportunities to learn from speakers and share information:

- Participants shared information on the "glads, sads and mads" of how the department works together as a unit;
- The staff heard about the needs of key external stakeholders, including motorists, a major trucking company, a large chamber of commerce, private sector companies, and members of the State Legislature.

- Department staff presented information from five “environmental scans” relating to transportation and the workplace, including technology, demographics, safety, quality workforce, and fostering a comprehensive view of transportation.
- Participants then discussed changes to the existing vision, mission and value statements of the department, and discussed action steps on each area of emphasis.

Strategic Plan results

The strategic change event was highly successful in developing a more effective and relevant Strategic Plan, and gaining department-wide support and enthusiasm for the plan. It also helped staff to feel valued, to respect others in the department, and instilled a shared commitment to further improvements in the department.

WisDOT formally adopted the updated Strategic Plan in October of 1999, with the following key elements:

Mission: Provide leadership in the department and operation of a safe and efficient transportation system.

Vision: Dedicated people creating transportation solutions through innovation and exceptional service.

<i>Values:</i>	Accountability	Improvement
	Attitude	Integrity
	Communication	Respect
	Excellence	Teamwork

Emphasis areas:

- Increase efficiency
- Promote transportation safety
- Anticipate and meet our customers’ needs
- Foster a comprehensive view of transportation
- Maintain a quality workforce
- Strengthen partnerships

Next steps

The broad Strategic Plan serves as a blueprint for developing individual division business plans and unit work plans. Most units plan to complete their business plans in the summer of 2000. Many are using some of the same tools and techniques modeled at the strategic change event. All of the planning efforts eventually contribute to the development of the department’s 2001-2003 biennial budget.

WISCONSIN DEPARTMENT OF TRANSPORTATION

Experience with managing change

AASHTO / TRB workshop, June 25-27, 2000

Session name: Workforce & reorganization

Transforming WisDOT's districts

In an effort to become more responsive to customers, emphasize a multi-modal system, and become more efficient, the Wisconsin Department of Transportation (WisDOT) began in 1995 to reexamine its operations, starting first in central office, and then moving to statewide transportation districts.

In 1996, WisDOT's central office was organized into three "modal divisions" in a process called "Transform". The new structure offered a consolidation of many similar services in the central office, the opportunity to streamline decision-making, and the ability to update technologies and processes.

Later that year, a "Transform 2" process began to focus on the eight transportation district offices throughout the state. There were five core goals of Transform 2:

- To adopt the concept of "transparent boundaries" creating a system to share work and resources between Districts;
- To consolidate recommended activities to fewer than the eight existing district locations to increase efficiency;
- To implement a consistent internal organizational structure among districts that would, in time, reduce the number of managers;
- To keep the eight district offices in their existing locations to maintain and strengthen local relationships and serve as the eyes, ears and voice of the department; and
- To develop a more effective "front door" for the department in all field offices to improve customer service.

Developing the Transform 2 plan

WisDOT's Division of Transportation Districts (DTD) undertook an eight-month planning effort to determine the Transform 2 changes needed in the districts. DTD assigned staff teams to analyze three key areas and make recommendations for the division:

- One team was assigned to review **internal structure** and establish a plan to convert all districts to a consistent organizational model. This team assigned all activities to core business areas, assigned managers, finalized accounting and project tracking codes, and updated security tables.
- A second team determined **activity consolidation**. The team determined five activities for which consolidation could be achieved, including design work, consultant contracting, labor compliance, certain real estate activities, and state and local road inventories.
- The third team reviewed **resource management** plans with a focus on highway project development, including design and construction delivery. The team developed a staffing model based on projected program levels, project types, and performance goals.

The planning teams communicated with employees through a number of media, including newsletters, e-mail bulletins, a video, and a division meeting. DTD also used an employee survey to evaluate attitudes and understanding of Transform 2 recommendations.

Putting Transform 2 into place

WisDOT implemented the Transform 2 changes over an 18-month period from January, 1997 through July, 1998. DTD created a new cross-functional organization that was better suited for meeting department goals in today's world. The transition included the implementation of a new internal structure, and was accomplished partly through managing retirements and taking advantage of other opportunities as they arose.

The new internal structure provides fewer and more clearly-defined contacts for internal and external customers, partners, and stakeholders. The structure is meant to lead to final and consistent answers in one referral step, and a greater degree of uniformity across all districts.

By reducing the number of supervisors and managers in the districts, WisDOT hopes to improve communication across the organization and increase employee empowerment. The new structure also provides flexibility to accommodate changing budgets, programs, workforces, and local/regional needs.

The transition to the new organization has largely been smooth, thanks to the cooperative efforts of employees, and represent a positive step forward for both WisDOT as a whole and for the division as a unit.

WISCONSIN DEPARTMENT OF TRANSPORTATION

Experience with managing change

AASHTO / TRB workshop, June 25-27, 2000

Session name: Process & Program Delivery

Facing an EPIC task

In March of 1998, the Wisconsin Department of Transportation (WisDOT), faced with both the blessing and the challenge of delivering an expanded highway program, created the Expanded Program Implementation Committee (EPIC).

EPIC was created in response to revenue increases from both state and federal levels, including from the TEA 21 passage in August of 1998. These increases provided the opportunity to plan a larger highway program, but also created challenges to deliver the program in a compressed time frame with virtually no growth in WisDOT staffing.

EPIC established four key goals for its work:

- To provide a broad oversight of expanded program delivery;
- To provide broad oversight of process improvement projects;
- To provide a coordinated focus and source for information; and
- To facilitate problem resolution.

Assessing activities, problems and barriers

One of the initial EPIC activities was to make an inventory of factors, activities, processes and barriers relating to the expanded highway program. The committee found that the delivery process was working well, that divisions were aware of the increased goals and were taking action to deliver the program, and that process improvements were progressing. EPIC did identify that WisDOT needed to improve communication with stakeholders.

EPIC also noted many other specific issues relating to program delivery:

- The delay in passage of TEA 21 (approximately 10-months past the ISTEA reauthorization deadline) was affecting project delivery.
- WisDOT needed to determine increased program delivery goals for both the immediate and 6-year future, and finalize strategies to achieve those levels.

- There were resource shortages in many key positions that called for in-house training, expedited hiring processes, programs to attract and retain staff, and increased use of consultant services.
- EPIC found that WisDOT needed to improve the ability to track program and “shelf” development of projects, and needed to improve management information to monitor program delivery.
- The committee also noted that environmental issues continued to be a concern, especially regarding excessive mitigation requirements and delays in review and approval of projects.

EPIC results achieved

Through its work, EPIC established a number of process improvement projects to address many of the issues and barriers limiting program delivery. The key goals of these process improvement efforts were to improve efficiency of project delivery, to reduce the time to deliver PSE’s, and to maintain and improve the quality of products and services.

EPIC considered 60 process improvement studies in nine subject areas, with WisDOT eventually undertaking all but six of them. Key studies included review of the use of master contracts, study of certain real estate contracts, analysis of accelerated design processes for rehabilitation projects, and expanded use of SHRM principles.

Overall, the EPIC initiative resulted in several major accomplishments:

- It increased awareness and heightened the sense of urgency for the expanded program;
- It expedited process improvements;
- It improved communication with stakeholders and between WisDOT divisions; and
- It identified and resolved issues that impeded program delivery.

In April of 1999, EPIC was formally completed, but the recommendations and activities of the initiative were molded into existing administrative functions. In particular, WisDOT managers are continuing to monitor program delivery and shelf progress, to receive quarterly reports on process improvement projects, and to ensure more effective communication with affected stakeholders.

THE STATE



OF WYOMING

Process and Program Delivery


Jim Geringer, Governor


Gene Roccabruna, P.E., Director

Department of Transportation

5300 BISHOP BOULEVARD (82009) P.O. BOX 1708 CHEYENNE, WYOMING 82003-1708

MEMORANDUM

TO: Sleeter C. Dover, Administrator
Administrative Services 

FROM: Nancy J. Wiehagen, Manager
Quality/Customer Service 

SUBJECT: Quality/Customer Service Implementation Plan

DATE: January 8, 1999

The passage of ISTEA in 1991 has subjected DOT's to a variety of internal and external influences impacting their missions and the ability to achieve them. Pressures outside the transportation sector have also influenced strategic initiatives, along with financial constraints, downsizing and restructuring. The interest in program delivery performance, especially in construction activities, emphasizes the need to retain and improve the workforce while involving the public and other stakeholders. As AASHTO observes in a recent publication,

[a] key measure of progress in strategic management is the degree to which the organization is responsive to the key expectations of user-customers and other stakeholders in respect to products and services.¹

Nationally, the trend is to define strategic actions that, when measured, track the agency's ability to fulfill its mission. Customer satisfaction, successful partnering with industry, developing and training a less experienced workforce (due to downsizing) and implementing technological changes are the four measurable initiatives of significance.

The following are suggestions for implementing WYDOT's Quality/Customer Service Program. A major suggestion is to move away from TQW terminology since it suggests a project rather than a process. The verbiage I use is 'continued improvement' -- learning more and constantly striving to be better today than I was yesterday. It is *my* philosophy to continually grow, both personally and professionally. I also like the

¹The Changing State DOT, AASHTO, 1998.

term because it denotes action and can be easily explained to all levels of employees.

1. **Quality Council**

Create a Quality Council comprised of WYDOT employees who are committed to continuing improvement and have the influence to insure that it occurs. Permanent members should be the Director and quality/customer service manager. Two positions will be held by staff members who each serve a two-year term. One additional person drawn from the employees at large will also serve for two years. The terms should be staggered, so the first time terms will need to be adjusted to fit. This council is essential to the success of the program, so active participation by all council members is necessary. The council will meet monthly.

The Quality Council's responsibility is to identify critical customers and issues, prioritize the issues, authorize teams to address the issues, approve (when necessary) team recommendations for improvement and monitor/recognize the implementation. Approval of team recommendations must be timely. As continuous improvement becomes the daily norm, however, the need for the Quality Council approval may diminish.

The Quality Council's first task is to review an agency self-analysis. The quality/customer service, human resources and training managers will conduct the self-analysis survey using the Malcolm Baldrige National Quality Award (MBNQA) and Wyoming State Quality (WSQA) criteria. (See attachments A and B.) The initial purpose of this exercise is to target areas needing improvement. A long-term goal is to submit applications for these awards.

This is a time-consuming project encompassing the entire department. The results (and revelations), though, are worth the time, effort and commitment.

Time frame: With staff approval, the Quality Council can be established by the end of February.

Working with the human resources and training managers to 'fine tune' the MBNQA and WSQA questions to fit WYDOT, this project will take three months. Three weeks of this time will be spent breaking down and revising the questions to be pertinent to WYDOT and determining who (which program) should complete them. The program managers will have four weeks to complete the questions with the remaining five weeks used to review, interpret, follow-up and report on the program manager's responses.

2. **Value-based Improvements and Recognition**

The improvements must have value to the organization. Establish a "reward" system, in addition to the monetary system, for improvements. **Before** a team is authorized to proceed, but after the issue is identified, establish the criteria that determine success and then set a reward the team will receive. The Quality Council should obtain input from the team as to what the members consider a success and

Quality Implementation Plan

January 8, 1999

modify, expand or accept it and then set an appropriate reward.

Individual recognition as well as team recognition is crucial. Little successes must be applauded as it may take months (years?) to reach big goals. The little things, though, really make a difference day to day and may have even more impact on the program. People love to see their picture and name in print so I propose posting successes to the WYDOT web page and including them in the *Interchange* also to make sure that the participants are recognized.

Time frame: This is not a set project, but a continuous process. The *Interchange* recognition is just one method of reward. Other options will be proposed and evaluated with the Quality Council.

3. Survey

Conduct a survey as to *what* motivates WYDOT employees. Coordinate the survey with the training manager's assistance. Find out if the employees even see a need for improvement. Find out if employees think it worth their while to suggest improvements. Tailor questions from the WSQA and MBNQA applications.

Time frame: Working with the human resources and training managers, I foresee this being a simple, short survey distributed randomly throughout the department. The employees will have one month to complete and return the questionnaire. It will take a month to review, interpret, follow-up and draft a report to the Quality Council.

4. Cascading Goals Training

Interesting concept -- what each employee does (such as answering the telephone) as a task fulfills an objective targeted to a goal that meets the vision. Need to emphasize the task at the employee level and show how it escalates to the vision. This process needs to be brainstormed and role-played with a select group to make sure the point gets across. The training manager's expertise should be utilized here.

Time frame: This is an continuous process, used as new employees are hired or promoted. Working with the human resources and training managers, WYDOT needs to develop two training programs. One will be for employees on a leadership (management) track and the other to keep good, solid employees up to date on information, skills and technology to improve themselves in the position they currently hold.

5. Quality Exchanges

The Quality Council meets with teams for updates and to lend assistance. These meetings are NOT designed to be 'check up' meetings. They should focus on the team talking (about what they are doing where and when) AND asking for the assistance the team needs from the council in areas where resistance and

barriers exist. The teams should network on their own so they can benefit from each other's ideas.

Time frame: Quality Council/team meetings should occur monthly to lend support to the team. They should last approximately one hour and have an agenda.

6. **Train Program Managers (PM's)**

In the team-based environment, the role of the program managers is changing from the traditional "boss" role to that of a coach or advisor. Extensive leadership training is necessary to assist program managers as they find new roles fitting the agency's mission. Responses from the MNBQA and WSQA surveys will indicate where WYDOT is strong and areas that need training.

Critical to the success of continued improvement is training on when to use a team and when to just make the decision. The WYDOT facilitation team is developing a brochure to better educate WYDOT program managers about the role facilitation plays in the team concept. Washington DOT uses a flowchart to help decide when to use teams. It is detailed and easy to follow -- suggest we revise it to fit WYDOT and use this form. (See attachment C.)

It will be necessary to train the PM's that they **must** implement the team, task force or group's suggestion. Actually, they must not only implement the suggestion but also **support** it -- there must be buy-in. If necessary, they need to "fake it till they make it" to give the suggestion a solid chance for success. They also will need training on leading "failure" -- when a team's idea does not work.

Time frame: Continued Improvement training needs to be an on-going process for the first few years -- a beginner course, intermediate classes and then advanced sessions. The initial training will be compiled from the survey results. It will be late spring before the courses can be put in an order of necessity. The training can be revised as WYDOT becomes more sophisticated in Continuous Improvement. Utilize WYDOT trainers and expand in-house trainers, making sure we have at least two in each district to assist in timely training. Like the facilitators, these employees are used only when necessary.

7. **Train the Employee**

The other half of the equation is to train the employees about their role and responsibilities. Training needs to be elementary and detailed, even modified for each group -- by specializing the examples to the group being taught. Here is where the idea of cascading goals are emphasized.

Time frame: Again, Continued Improvement training must be on-going for the first few years with beginner, intermediate and then advanced courses. The training manager's expertise is critical here with the employees and will generate from the survey responses. This training program can be developed at the same time as the leadership program. Again, use WYDOT trainers and expand in-house trainers, making sure we have at least two in each district to assist in timely training when necessary.

8. Measure

WYDOT needs to measure customer needs vs satisfaction. The two awards applications force respondents to evaluate and measure in order to respond to the sections. Since WYDOT has numerous customers, tailor the surveys to each program.

1. Assess customers' needs -- bare minimum to get the job done
2. Assess customers' desires -- goal to strive for

Then WYDOT must measure these items as the processes are changing and after change occurs. Measuring along the way -- evaluating and adjusting as necessary -- makes continuous improvement a process, not a one-time project.

Time frame: Measuring success in the public sector is extremely difficult. This is an area where WYDOT may need to use a consultant to train us. WASHTO has grant money available for quality initiative programs which may help offset the cost of a consultant.

9. National Quality Initiative (NQI) and Quality Assurance/Quality Control (QA/QC)

NQI is an aspect of the total quality initiative. Because of its technical nature, it focuses more on the "highway" side of WYDOT and the transportation industry. NQI enables the department to expand and reinforce partnering with the industry, which will assist in improving customer service and satisfaction (WYDOT Strategic Plan Goal #5).

NQI may not be a full-time project. Initially, it can be accomplished by adding it to a current position. Because of NQI's focus on transportation functions, the individual performing these duties should have a technical background, as well as the ability to communicate well with outside contract professionals and the general public.

Time frame: The NQI and QA/QC portion of quality should wait until the surveys have been completed. WYDOT needs to establish a quality baseline for the agency as a whole rather than developing pockets of quality. Once the Quality Council identifies areas of needed improvement, NQI and QA/QC can be incorporated into the areas where applicable.

10. Facilitation Team

The facilitation team is not a program or process but, like the WYDOT-trained trainers, is a tool of quality. Benefits in utilizing these individuals throughout the quality process include that they practice team culture, maintain and expand facilitation skills and champion the quality program.

Taken together, these ten points will help WYDOT reinvigorate and continue the on-going process of improving those attributes the Quality/Customer Service Program was created to address.



THE STATE OF WYOMING

Workforce and Reorganization

Jim Geringer
Governor

Sleeter C. Dover
Director

Department of Transportation

Office of the Director

Welcome to WYDOT University,

This is the beginning of a new era in the Wyoming Department of Transportation. We have committed ourselves to a program of continuously improving our goals, our processes, and our people. To accomplish these three important tasks this department will need exceptional leaders at every level. I believe the concept behind the creation of the Wyoming Department of Transportation University will help create new leaders and enrich the ones we already have.

Please read the attached WYDOT University plan closely. Use it as a guide to develop not only your personal leadership skills, but also those of the people who work with you. The next generation of WYDOT leaders is already with us. We need to identify and nurture leaders to accomplish our mission today, tomorrow, and for decades to come.

Along with the WYDOT University plan you will find a survey asking your opinion about our greatest leadership training needs. After reading the plan, take time to answer the questions carefully. Your responses will determine our first steps on this path.

Sleeter C. Dover
Director

Attch: Survey
WYDOT U Plan

WYDOT University Leadership and Management Program

Philosophy and Purpose

- ☐ Producing leaders to meet present and future organizational needs is a key goal of the Wyoming Department of Transportation. The WYDOT University will help meet that goal.
- ☐ In cooperation with their current supervisor and using this document as a guide, managers, supervisors, and non-supervisors at all levels should take an active part in planning their own training and development
- ☐ The knowledge, skills, and abilities of leaders and managers must be developed over time through the combination of formal training and real-life experience. This program provides a recommended progression of training so that our supervisors and managers are better prepared to meet the challenges they face in helping accomplish the agency's mission.
- ☐ Specific technical skills are not addressed here. Technical training should advance as needed by changes in technology and the responsibilities of the individual. Balance, though, should be maintained between the technical and non-technical knowledge, skills, and abilities required for effective leaders.

Supervisory/Management Tiers

Four tiers of leadership training are identified in this program. **Tier I** is for new supervisors. **Tier II** contains the additional training needs for experienced supervisors—those with approximately two years or more in a leadership role. **Tier III** is designed for intermediate leaders/managers. Finally, **Tier IV** addresses executive training demands. Supervisors and managers will need to maintain proficiency in all these skills to remain truly effective. Refresher training and advanced development opportunities are *highly recommended* throughout a leader's career. If your current ability to effectively perform a skill listed at a lower tier is needing improvement, you are invited to seek training in that skill. There is no stigma attached to pursuing training in skills described in any tier lower than your current position. Taking similar training to past classes, or even repeating courses, every three to five years is encouraged in order to update skills and to relate accumulated experience with leadership principles.

Baseline Courses are considered vital to the successful development of effective supervisors. WYDOT University's Baseline Courses are:

- ☐ **New Supervisor's Orientation** should be completed just prior to or shortly after entering Tier I. It includes an overview of WYDOT's mission, structure, and interrelationships among the various divisions and programs. It will also review policies, paperwork, and procedures that are unique to WYDOT, such as the *Supervisor's Employee Management Manual*, the budgeting process, the purchasing/bidding process, and public affairs awareness.
- ☐ **"What Matters Most"** is a one-day Franklin Covey class emphasizing time and life management principles. It is offered quarterly on the Tel8 videoconferencing network. The class should be taken before or upon entering Tier I.

- ☐ **“The 7 Habits of Highly Effective People”** is a four-day Franklin Covey course emphasizing personal development, self management, and effective relationships. “7 Habits” can be taken before or after entering **any** tier, but Tier II supervisors should certainly take the course before advancing to Tier III. It is available on Tel8 quarterly or in-house upon request.
- ☐ **“The 4 Roles of Leadership”** is a three-day Franklin Covey course focused on organizational leadership. It adds leadership skills to management skills to help produce more effective leaders and organizations. This course should be accomplished while in Tier III or shortly after entering Tier IV. It is available in public offerings or could be brought on-site by contract.

Tier I, New Supervisor—Needed Knowledge, Skills, and Abilities:

- ☐ Performance Appraisal training for evaluators is required by the State Personnel Rules.
- ☐ Sexual Harassment training is required for all employees by Executive Order 1993-4.
- ☐ Ethics training is required for all employees by Executive Order 1997-4.
- ☐ Non-supervisors are encouraged to acquire some needed Tier I skills even *before* becoming supervisors—for example, customer service, goal setting, and interpersonal communication.
- ☐ Additional knowledge, skills, and abilities needed by new supervisors (listed alphabetically):
 - Budgeting/Cost Prediction
 - Customer Service
 - Dealing with Difficult People/Conflict Management
 - Delegation/Empowerment
 - Disciplining Employees
 - Feedback Skills
 - Goal Setting
 - Grievances/Complaints
 - Interpersonal Communication/Listening
 - Problem-Solving/Decision-Making
 - State Personnel Rules/EEO/ADA/FLSA/FMLA/WYDOT Policies
 - Stress Management
 - Time Management

Tier II, Experienced Supervisor

- ☐ Additional knowledge, skills, and abilities needed by experienced supervisors (listed alphabetically):
 - Coaching
 - Facilitation Skills
 - Interviewing/Hiring Practices
 - Managing Meetings
 - Motivation
 - Team Building
 - Workplace Violence Prevention

Tier III, Intermediate Leader/Manager

- ☐ Additional knowledge, skills, and abilities needed by intermediate leaders/managers (listed alphabetically):
 - Community Relations
 - Dealing with Change/Managing Change
 - Planning/Project Management
 - Presentation Skills
 - Quality Principles
 - Team Leadership
 - Writing Skills

Tier IV, Executive

- ☐ Additional knowledge, skills, and abilities needed by executives (listed alphabetically):
 - Media Skills
 - Mentoring
 - Political Relations
 - Public Speaking
 - Strategic Goal Setting
 - Succession Planning
 - Visioning

Progression within the Tiers

- ☐ Despite the tiered structure, *the emphasis of WYDOT University is on acquiring needed skills*. If a skill is needed now or soon, no matter what tier you are in or what tier the skill is listed in, seek the training that will lead to learning that skill.
- ☐ Completing any or all of the recommended training in this program does *not* guarantee promotion or a raise. However, having a vision of your own future, along with a progressive training and development plan, will place you in a more competitive position when opportunities for advancement occur. Training alone does not lead to higher responsibility—advancement requires *effectively applying* the skills learned from training.
- ☐ The knowledge, skills, and abilities required to be an effective leader should normally be planned and developed prior to, or very soon after, advancing up the tiers. However, learning leadership skills early will help you at your current level and can always be refreshed as you progress up the tiers.
- ☐ Employees interested in achieving supervisory roles should coordinate a personal training and development plan with their current supervisor. Supervisors and managers who aspire for higher positions should work on acquiring the knowledge and skills required for the next higher tier. Executives should focus on continuous learning as a way to enhance their own abilities and to help develop future generations of WYDOT leadership.
- ☐ Continuous learning is a trademark of effective leaders. The knowledge and skills of supervisors at all levels need periodic improvement and enrichment.