
RIGHT OF WAY QUALITY MANAGEMENT SYSTEM

THE JOURNEY OF FIVE STATES

Real Estate Services Research Report

July 28, 1999



United States Department of Transportation
Federal Highway Administration
Office of Real Estate Services
400 7th Street, S.W.
Washington, DC 20590

www.fhwa.dot.gov/realestate

The following study was conducted by Quality Environmental Professionals, Incorporated (QEPI), of Indianapolis, Indiana, under contract with the Federal Highway Administration Office of Real Estate Services. Principal Investigator for QEPI was Deborah E. Peters.

The cooperation of the State Transportation Departments in Florida, Louisiana, Oregon, Pennsylvania, and Wisconsin is gratefully acknowledged.

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General Overview

This paper describes the types of management systems and best management practices present within State Transportation Department (STD) right-of-way (ROW) divisions. Additionally, it presents how to plan, implement, and measure a management system. Finally, this paper profiles 5 State ROW divisions in various phases of implementing their management systems. The states included are Wisconsin, Pennsylvania, Florida, Louisiana, and Oregon. Before discussing the particular states visited, it is helpful to first gain some familiarity with the terms and concepts associated with an integrated management system.

It is difficult to explain the concept of a management system without defining quality. Quality, as defined in the American Heritage Dictionary, means a characteristic or attribute of something, a property or feature. It may also be defined as the natural or essential character of something or as excellence, superiority, or a degree or grade of excellence.

A further challenge to implementing a management system is employee resistance to change, particularly when employees have experienced multiple management initiatives. Their reaction may well be, "Here comes another program." Additionally, employees may not have been introduced to management principles as they relate to a service orientation. But as managers and employees of State DOT-ROW divisions know, many years of government down-sizing has required STD employees to become masters of "doing more with less."

How can your division complete more work and achieve a higher value of service with fewer financial resources? It is through understanding your processes, and then implementing a management system specifically designed for your agency. What works in Florida may not be right for South Carolina, and what is right for Pennsylvania may not be appropriate for California or Indiana. A management system requires commitment and support from management, open and candid training and communication for all managers and employees, an in-depth evaluation of existing processes, and a plan with a vision for your agency's long-term management investment.

What is a management system and how does it help to improve the agency's service? What does it mean for the State DOT-ROW divisions, and how has a management system helped them? The management systems implemented by the five selected ROW divisions have allowed them to work smarter while providing better service to their customers, even with fewer employees. Jim Dousay, Louisiana's director of real estate, said at the AASHTO Conference in Colorado Springs, "TQM in Louisiana means 10 new computers for my division".

How do I get my employees ready to embrace a new management system? It is important to understand that when employees say, "Watch out here comes another one," it is not because they lack motivation or have bad attitudes. It is generally because previous logical-sounding solutions for increasing employee productivity never materialized. Why did those promised changes not materialize? When changes fail to happen, it is generally because no one really understood what the changes meant or felt committed to communicate and train on them.

While the management team may be committed to improvement, it is communication and training that is missing from the success equation. Most management systems fail because technical people are serving in management roles when they have not been properly trained on management techniques.

Management systems, if understood and implemented correctly, will not add to the existing workload but will reduce the amount of work through streamlining job processes, reducing errors, and creating an overall work environment that is truly motivational. Incorporating pride in public service, ownership in the job, and quality into the job processes allows value to be added without costing additional labor.

How does an agency get to this point? Agencies should consider moving cautiously at first, focusing their attention on understanding and documenting job processes. After job processes are clearly identified and understood, then the agency is ready to begin its journey to establish a great management system.

The concepts of quality and continuous change (or improvement) are important concepts to consider, but how do you go about building a management system at your specific State ROW organization? This task can be accomplished through using a model as the generic framework, which develops a specific system. Webster defines a model as something that is capable of serving as a pattern. In this case, the model serves as the pattern for a management system.

Excellent representations of quality management models include the philosophies of W. Edward Deming, PhD; Philip B. Crosby; J.M. Juran, PhD; Tom Peters; and the Malcolm Baldrige National Quality Award Criteria. Dr. W. Edward Deming is known as the father of the quality movement. His model focused on 14 points to achieve quality, productivity, and competitive position. His overall philosophy focused on management's obligations and commitment to quality. Dr. Deming identified quality as getting the best from people.

Mr. Philip B. Crosby's quality management model describes the four absolutes of quality management and "Fourteen-Step Quality Improvement Process." Mr. Crosby's 14-step process is focused toward implementing quality through management commitment similar to Dr. Deming's. Mr. Crosby believes that management must communicate its understanding of and commitment to quality to the employees, provide appropriate employee training, and recognize quality performance by employees.

Management expert J.M. Juran, PhD, established an 11-step process that urged all management levels to provide hands-on leadership. Within his 11-step process, the first 8 steps focus on evaluating existing problems and symptoms. The remaining steps address remedies to the problems.

When evaluating the management-consultants, one would be remiss not to mention Tom Peters. Once again, as stressed by Deming, Crosby, and Juran, the first attribute of a successful management system has to be top management's attention to or obsession with quality. Mr. Peters believes that most quality programs fail for one of two reasons: either they have a system

without passion or passion without a system. Mr. Peters believed that quality must be measured at the onset for any improvement process.

The Malcolm Baldrige national quality award criteria are used by many Federal, State, and local units of government as guidance for evaluating their progress in the quality journey. The Malcolm Baldrige model requires an organization to place a strong emphasis on quality results and customer satisfaction. The Baldrige model stresses six common features that contribute to an organization's improved performance. These include (1) customer focus, (2) senior management leadership, (3) employee involvement and empowerment, (4) an open corporate culture, (5) fact-based decision making, and (6) a partnership with suppliers.

It is important to extract from all of the available management system models those common characteristics that are necessary for success. The following is one model that synthesizes many of the major characteristics:

- Management is committed to quality.
- Employee participation is encouraged throughout the organization.
- A customer focus permeates the organization.
- The organization benchmarks itself against its peers.
- The organization continuously improves its processes through innovation.
- The organization monitors its progress through appropriate statistical methods and shares that information throughout its ranks.

To incorporate this simplified model throughout the organization, it is imperative to educate everyone on the management system design and implementation process. Mr. Crosby notes the six "C's": comprehension, commitment, competence, correction, communication, and continuance.

Crosby's six "C's" reveal that comprehension must precede change. Next, there must be commitment to change from both the management staff and the employees. Competence means implementing change in a methodical way. Correction refers to the process of problem-solving, and communications goes to the importance of communicating to all parties involved in the process, including suppliers and customers. Finally, continuance is remembering how things were and how they will be in the future.

The development and implementation of a management system is a continuous improvement process, one that never ends. When the system is not working, a steady focus by the organization can make it better. If the system is performing well, a continued focus by the organization can make it among the best. Therefore, education focused on the key parameters of the selected management system must be continued forever, no matter how the system works in the short run.

It is important to understand that with any management system there are critical steps in the process. Those steps are planning, implementation, monitoring and measurement, and revision.. After management has committed to a management system and communicated its commitment to employees, the first step is the planning process.

The Planning Process

The planning process varies slightly in the private and public sectors. Generally, planning in the private sector is highly profit-oriented, whereas planning in the public sector is strongly mission-oriented. In both sectors, it is important that organizations include the concepts of quality, best management practices, and continuous improvement in their planning efforts to ensure continuous movement in the right direction. Organizations (like organisms) that do not evolve either undergo significant stress in a changing environment or become extinct.

This study found that State ROW organizations need to implement a more formalized strategic planning process. In discussions with various parties across the country, wide disparity emerged in the importance ROW organizations attach to this process. State ROW organizations generally are in an environment where others set the overall priorities and goals for the department. Goals are set by planning, design and construction departments, the political process, and the public. However, State ROW organizations should realize that this situation typifies many public, nonprofit, and private groups that have also successfully implemented strategic planning. Therefore, the opportunity exists for ROW organizations to develop their own missions, core competencies, sub-goals, and action plans in line with the overall goals of the STD.

To begin the strategic planning process, the State ROW organization determines how four key concepts of management apply to their operations. First, ROW organizations provide a service, not a product. This means that the ROW division performs work for other parties. Those parties control the workload, just like customers in private industry Control the workload through their ordering of services.

Second, ROW organizations have both internal and external customers. Internal customers may include administrative, design, construction, and specialty technical groups. External groups may include local public agencies (LPAs), suppliers, other government agencies and the public impacted by the ROW process. A focus on what these customers need from the ROW division is fundamental to strategic planning.

Third, customer satisfaction is achieved when the service provided by the ROW division meets the needs of its internal and external customers. This means that the ROW organization must define its mission in terms of the expectations of other groups.

A period of training and communication should precede the start of a strategic quality planning process. The magnitude and duration of that training depends on the flexibility and the degree of honest communications shown by the personnel involved in the process.

Strategic planning efforts should exhibit flexibility in thought and be inclusive in nature. These two attributes of a successful strategic plan are critical because ROW organizations are highly dependent upon other groups for both input to the ROW process and output to the construction group. Flexibility in the plan allows personnel to easily adapt when there are changes in workload or environmental factors. Inclusiveness makes everyone a part of the process and

promotes teamwork. These two attributes of a successful plan will allow a ROW organization to better share workload across functional or geographic boundaries when conditions warrant, as well as adapt to a rapidly changing environment as necessary.

Implementation of a Management System

Implementation of an integrated management system causes many emotional responses from employees. One that generally appears first is fear of change. Often, when discussing management systems with employees, one popular response is "Well, we have been doing this work the same way for 25 years and nothing has been wrong with it, so what's the fuss now!" This mindset is fatal to effecting a creative environment that is technologically current.

Another frequent comment reflects the second big fear of management system implementation: actual job performance expectations. The employee who lacks confidence in his/her job performance might ask, "Is management implying that we haven't been doing quality work now?" Indeed, continuous improvement implies to most people that something must be wrong if there's a need to improve, although that may not be the case at all. There was absolutely nothing wrong with the first automobile manufactured in the early 1900's. However, customer input and continuous improvement in the design process of manufacturing companies have resulted in many new design improvements throughout the automotive revolution. Absent such continuous improvements, we might all still be driving black Ford Model T's.

Finally, without a commitment to implement a management system, the overall system will not succeed. Mr. Crosby believes that one of the main obstacles to management system improvement is the stubborn mindset of management. He also believes companies that rest on their laurels or have only a large book of policies and practices might not save their organizations from disaster. For him, management must believe in quality and continuous improvement and incorporate three distinct management actions: determination, education, and implementation. If management believes that schedule and cost come before quality and improvement, then a major shift in thinking must inform the process since only quality improvement can ensure that the cost and schedule will always be met.

Measuring Success

Now that your agency has implemented its management system, how is the system monitored and measured for successful performance? Does quality in production and manufacturing equate to quality in service? If so, how do you measure quality? How is quality defined in the service organization? What performance standard do you select to measure quality? Finally, what measurement system is required to assure continuous improvement?

There are many ways to measure effective uses of processes in an organization. The most widely accepted approach is to monitor and measure improvement through evaluating and interpreting the data that relate to the specific processes. Because these data are used to measure quality, they

are referred to as performance measures and/or indicators. Service performance indicators involve measuring the effectiveness, capability, and efficiency of the process.

Performance indicators measure the input to a process. The input, in turn, affects the output of a process, the measurement of which is termed a cause-and-effect indicator. For example, in the ROW process, if the acquisition negotiator were inefficient in his or her performance, then the time to complete a project and project's cost would be greater than for a more efficient acquisition negotiator. Time and cost are inputs to the process, and their measurements would be likely performance indicators for the specialist. On the other hand, the condemnation rate may also rise, but this measurement is one of output of the process. In some cases, the process might actually be more efficient (i.e. take less time and cost less money) if the property is condemned. In this case, the condemnation rate will still rise, but does not reflect a gain in process efficiency.

Collecting appropriate data as performance indicators means understanding your processes and comparing your process data against measures. It's important to use output from performance indicators to establish strategic goals. Performance indicators are not merely counting the number of phone calls, memoranda, or letters each employee generates; they are evaluating the results of phone calls, memos, or letters that may lead to process improvements.

Revisions and Changes in the Continuous Improvement Process

It becomes especially important for service organizations to incorporate changes and revisions resulting from internal and external process evaluations, customer input, employee input, and other performance indicators. After all, what good is an evaluation if needed changes are not made? It is also important to understand which modifications and/or revisions need to be made. In order to move forward with your management system, revisions will be necessary.

Organizational Structure and Management Systems

Implementation of an integrated management system depends upon the size and organization of the ROW function within the individual State agencies. The highway development process is a function of both the size of the state and whether the organization is centralized or decentralized in its decision-making process.

The centralized governance structure is a traditional hierarchical approach. The central office is the decision-making authority. Operations are carried out at the district or regional level under the direct supervision of central office administration. The role of the central office is that of central decision-maker and controller of the resources and workload. The centralized structure appears to operate effectively in facilitating communication of one team, one mission, and one goal. However, this structure is less flexible in responding to changes in workload and resources.

The decentralized structure, on the other hand, relies heavily on downward delegation of decision-making authority and autonomy. The district or regional offices in these states vary greatly in their operations, functioning as highly autonomous, independent units. The role of the

central office is that of monitor, and provider of technical assistance and administrator of policy. Given the diversity of operational structures, piloting different ideas simultaneously across a decentralized structure is not only possible, but also highly likely at any given time. However, variations in operations makes communication across office units in this type of structure much more challenging than in a centralized organization. This communication gap can often impose both operational variability and process implementation barriers across a state.

Obviously, the internal and external environments in which a state ROW organization operates has a tremendous impact on the type of management system that might be appropriate. Additionally, the level of effort required to design and implement the system is going to be greater for states that are trying to change their organizational structures, respond to a change in their workload or resources, or are experiencing rapid change caused by external factors.

A management system, if designed and implemented correctly, will allow the State ROW departments to: meet their mission goals, put mechanisms in place for measuring performance, and meet their financial goals. With this common base of knowledge regarding management systems, it is time to focus attention on the 5 states studied to learn how they implemented their management systems and how their best management practices might be shared among all States.

The Survey States:

FLORIDA

FLORIDA

A highly decentralized department carries out Florida's right-of-way mission. The state is comprised of seven geographic districts and one turnpike district. The district offices have responsibility for all operational matters, as well as for the quality control of their processes. The eight district offices allow local governments and planning organizations to give direct input into agency operations.

The central office is responsible for policies, procedures, and quality assurance activities. The mission statement for the division is to acquire the right-of-ways necessary to support the Department's work program in a cost efficient, quality manner while ensuring that full compensation is paid for all property acquired. State law requires the department to develop a 5-year work program.

Florida is a production-oriented state that has conducted more than a billion dollars worth of construction lettings per year for the last 4-5 years. In fiscal year 1998, the department let a record \$1.26 billion in contracts. Florida completes approximately 2,500-3,000 parcels annually, with direct expenditures averaging about \$300 million a year. The right-of-way division has 522 positions, with approximately 480-490 employed at any given time.

FDOT is committed to performance excellence and customer service. Its web page notes, "Achieving a better quality of life for all citizens in the state of Florida must begin by ensuring that the principles of quality management become the foundation for the way we do business in all public and private enterprises." FDOT follows the Sterling Criteria for Organizational Performance Excellence as its quality management model, which is founded on the Baldrige model. The Sterling criteria model is an integrated set of basic values, requirements, and processes aimed at increasing customer value and organizational effectiveness. It is a self-assessment tool to help organizations determine their current capabilities, including their own strengths and needed improvement areas.

Public Relations

FDOT is highly committed to customer satisfaction and has an abundance of tools to maintain positive public relations. The ROW division produces a number of informational pamphlets and brochures for the public, as well as a monthly newsletter for its staff entitled, "Right of Way Newsletter." Brochures are available in English and Spanish versions and are used on all projects. The newsletter is published to provide information about current issues for all functional areas in ROW, to make employees aware of all upcoming training opportunities, and to announce employee promotions and accomplishments. The newsletter is also made available on the department's Infonet. In addition to this publication produced by the ROW office, FDOT has a monthly newsletter devoted only to quality issues. Called the "Focus on Quality", the newsletter includes a "Quality Corner" featuring a monthly series by FDOT managers on the Sterling quality criteria.

One recent area of public relation's focus for the department has been public meetings. FDOT has taken steps to enhance these meetings through improved community relations programming. Another area of special focus has been working directly with businesses. These clients have special needs not traditionally seen with residential clients. FDOT is working diligently to have a more effective role in communicating with businesses to make sure that they feel included in the process. The FDOT established a special committee with numerous private sector business groups to look at access-management issues as they affect businesses. The "Access Management and Community Awareness Procedures" were subsequently developed with input from numerous functional offices within FDOT, including the ROW office.

In FDOT, public relations efforts also focus on the department's own staff. FDOT has an employee recognition program for merit pay increase, one-time cash bonuses for sustained performance or special projects, and a special awards program for individual and team performance. Supervisors nominate employees for permanent pay increases and one-time cash bonuses, but any employee can nominate a colleague or team for the special award recognition. Awards include permanent salary increases, cash bonuses, plaques, savings bonds, and certificates of recognition. FDOT also participates in the annual Davis Productivity Award program. These are awards presented by a private-sector group to state government employees and teams for process improvements that lead to cost savings. ROW employees have received several such awards.

Training

In the area of training, FDOT once again demonstrates outstanding performance. The training program includes new employees at the Real Estate II and III personnel classification levels. These classifications represent the vast majority of all ROW positions. The program, designed as an internship, allows the trainee to work with real-world situations using knowledge and skills introduced in a specially designed series of courses in the areas of appraisal and appraisal review, acquisition, relocation, negotiation, communication skills, and understanding maps and plans. Success in the program is based on the trainee's passing course examinations and on participating in on-the-job work units.

Efforts are made to align the type of work unit assigned with the type of course material covered during a particular segment. The training program is 2 years in length for Level II and III programs and is mandatory for all new Level II employees. ROW trainees receive salary incentives for successful completion of four different segments, amounting to a 5-percent salary increase every 6 months.

Continuing professional training is also offered, as needed, to all ROW employees. FDOT has a statewide training task force that meets quarterly to address training issues. All FDOT district ROW offices are represented. Task force members and district managers make improvements and monitor continuing performance resulting from the training program. Trainee suggestions are formally sought through class evaluation forms. District offices are also formally surveyed to determine developing training needs. These suggestions are provided to the task force, which incorporates them into the training program.

FDOT offers a series of training programs:

- Formal training offered to staff participating in the quality assurance reviews (QAR)
- A 2-day public involvement course offered by the planning office, soon to become mandatory for all departmental employees who deal with the public.
- A Leadership Academy that provides an intensive, 2-week course for top managers in leadership skills.
- A series of courses leading to the designation of "Certified Public Manager." Eight 4-day courses are offered, which employees are encouraged to attend. The first three courses, Levels 1-3, are required training courses for any supervisor in the central office ROW.
- Required training established by FDOT's personnel office in such human resource categories as supervisory training; knowledge, skills, and abilities; Americans with Disabilities Act; and sexual harassment.

Project Management

Project management is carried out using a multidisciplinary project team approach that is being implemented through the district office. The organization felt that multidisciplinary teaming would alleviate a past lack of coordination and communication across functional areas. The ROW office has its own mission statement and goals that are aligned with the mission statement of the State department. The ROW director would like to see this activity filter downward, where each office or section would also have its own mission or goals aligned with the FDOT's mission and goals—broken down further by technical area of specialty.

The department produces a blended business plan incorporating the following: a traditional government strategic plan, an inception plan from a volunteer organization that identifies and clarifies how the unit's services are handled with its internal and external customers, and a private-sector financial plan. These three features were blended into a business plan presenting a unified understanding of the role of the entire department, given its decentralized governance structure. FDOT modifies this blended business plan to address resource commitment, including staff hours and scheduling dates for each activity and milestones throughout the highway development process. FDOT feels the blended business plan is a "living document" to be updated continually that identifies both short-term and long-term goals and accomplishments.

ROW participates in strategic planning through FDOT's 5-year plan, which is the work development process. This process includes an evaluation of ROW projects worked, the schedules for each project, the resources (staff and consultant manpower) needed, and the estimated cost of the ROW phases. The ROW division also participates in business planning, a 1-year production plan that establishes the projected performance of each district on an annual basis. Each of the district ROW managers provides an anticipated plan to the central office ROW managers for review.

In addition to the blended business plan, FDOT holds a number of strategic planning and project management meetings. FDOT's executive committee approves the long-range mission and goals

incorporated in its 20/20 Plan (a long-range plan that looks at specific transportation needs 20 years into the future) and the agency's strategic plan. FDOT's secretary and executive committee meet monthly to evaluate progress toward achieving goals and performance standards. A production management meeting that includes the district production directors is held monthly to evaluate the district's progress on the plan. Additionally, the Florida Transportation Commission, as discussed earlier, formally monitors quarterly progress and reports to the governor and the legislature.

The central and district ROW managers meet 2-days each quarter with the ROW director for purposes of instruction, guidance, and business planning. Managers make numerous suggestions for process improvements that are implemented through procedural changes. These suggestions are formally tracked as action items on a ROW managers meeting matrix until corrected or implemented to the satisfaction of the central and district ROW managers.

FDOT also holds annual user meetings for all functional groups, where expertise and problem-solving activities take place. Each functional office within ROW (acquisition, relocation, and property management) holds quarterly or annual meetings, where employees make numerous suggestions for process improvements. This feedback is then developed into action items for address through procedural changes.

Production Tools

FDOT has developed a number of outstanding tools to assist with ROW activities, some of which have been mentioned in other sections of this State summary. FDOT has traditional production tools in place, such as e-mail, fax machines, training manuals, training conferences, advisory committees, and project teams. It also develops how-to-manuals and updates its ROW manual as needed. The budget tracking process has been improved with quarterly budget reports used by the department to evaluate its progress.

Internal and External Controls

Numerous internal and external controls are in place in Florida and are key elements to successful implementation of ROW activities. Most importantly, checklists, time schedules, and standards for specific processes and procedures are all in place and readily available for staff use. These checklists and forms are constantly being refined to implement suggestions or requested changes from district offices, property owners, or other users. FDOT's procedure requires checklists and forms to be developed and incorporated as procedural attachments. All quality assurance reviews solicit suggestions for improvement of these forms and checklists. The QAR process also monitors the effectiveness of the ROW office's processes and provides input back to revise and improve existing procedures.

FDOT only recently began using external customer service surveys. A multi-year pilot project was conducted using such a survey in two district ROW offices. The results were reported at the central and district ROW manager meetings. The pilot project was deemed successful and the

managers decided to extend the program statewide. FDOT seeks to maintain continuous communication between offices. While a formal internal customer service form has not been used between offices, State directors frequently send a representative to each other's statewide meetings to discuss problems and gain insight to jointly develop solutions on numerous issues.

The ROW manual and its procedures are updated as needed. However, a procedural review may be requested at any time. In addition, distribution of manuals is controlled to ensure that all manual holders receive updates. In November 1998, the central office ROW initiated an editorial format change to all procedures in the ROW manual to allow the entire document to be included in FDOT's internal computer database.

In addition to QAR activities, a series of audits are conducted to make sure that procedures and processes comply with agency directives. An audit plan is developed annually by FDOT's inspector general following receipt of input from all offices. The ROW has the opportunity to nominate topics for the audit plan, or the inspector general may select such topics based upon his or her understanding of program operations.

FDOT's database, the right-of-way control (RWC) system, tracks by parcel, as well as by functional unit. The system is useful, though it was created in the early 1980s and is ready for an update. To address concerns, a work group was formed to examine communications issues and redefine the process of developing projects through the planning and environmental management sections of the agency to promote a seamless process. The planning and environmental management offices (PLEMO) were tasked with this responsibility. The statewide PLEMO team meets regularly and has recommended process changes, which the executive committee approved.

Performance Indices

Performance indices in Florida are well developed and regularly monitored. FDOT has performance indicator data from 1994. Data are used to evaluate whether existing processes provide Florida with the means necessary to meet its overall budget and customer satisfaction goals. Performance indices are based upon measurable processes and are compared against the proposed business plan.

Florida Planning Model

Florida's ROW director, Mr. Ken Towcimak, has been involved in two strategic planning sessions over the past several months. According to Mr. Towcimak, FDOT's ROW division has its own mission statement that compliments FDOT's overall mission. He would like to see missions and goals developed for the functional workgroups within the ROW division as well. Finally, Mr. Towcimak shared that FDOT's senior management, through the executive committee, is committed to strategic quality management throughout the organization. That commitment has had a significant impact on long-term quality increases within the ROW division, as well as other divisions within FDOT.

The Survey States:

LOUISIANA

LOUISIANA

Right-of-way processes in the State of Louisiana Department of Transportation and Development (LADOTD) are conducted through a completely centralized organizational structure; however, a decentralized structure exists for the acquisition program. Louisiana has nine districts, all of which report to the central office. Downward delegation and empowerment are key in LADOTD. The real estate section has approximately 105 employees, reduced from 250 positions approximately 15 years ago. The state legislature limited the staff size of the organization through attrition. During this time, only the positions of secretary and appraiser could be replaced until the ROW section achieved the 105-employee target goal.

The ROW budget averages about \$20 million per year for acquisitions and \$3 million per year for employee salaries. Approximately 95 percent of the appraisal function, excluding appraisal waivers, is contracted out. This amounted to \$2 million in consultant fees last year (not including expropriations). The agency appraises roughly 600–2,000 parcels per year. The mission of the real estate section is to provide, in cooperation with public and private partners, efficient and effective ROW acquisition and related activities that promote economic development and enhance quality of life.

The appraisal waiver process in Louisiana starts with an internal cost estimate to determine if the waiver process is appropriate or if the property will go through the normal appraisal process. LADOTD estimates that only one-third of the parcels in a given project will be addressed in the waiver process, which is used only for properties where estimated value is less than \$10,000 and valuation is not complicated. The waiver level started at \$2,500 in 1997 but was increased to \$10,000 in fiscal year 1998. LADOTD staff completes all work using the waiver process. For properties over \$10,000 or for complicated parcels, the regular appraisal process is implemented, wherein LADOTD contracts for outside consultants to conduct the appraisal. Up to 98 percent of the appraisals are completed by contractors. Central office reviews the completed appraisal, which, once approved, is sent to the acquisition group who then contacts the property owners by mail.

LADOTD completes negotiations through use of mail and telephone. Staff found this technique to improve production and decrease costs with no loss of quality. Additionally, LADOTD staff discovered that many property owners did not want to meet with them personally, that they preferred having the offer sent to them so they could present it to their attorney or read it for themselves. In fiscal year 1998, 97 legal settlements were reached and only one case went to court. Costs to bring a claim to court can be as high as \$30,000. LADOTD estimates that in a year's time, up to five cases may go to court. If a legal settlement is reached, the State will pay attorney and expert witness fees. District managers can settle administrative suits up to \$10,000 without central office involvement. If LADOTD loses a suit, the State assumes court costs, attorney fees, and costs for a second appraisal (if conducted). In Louisiana, the courts have defined the full extent of an owner's loss in the state's constitution as an amount higher than the

fair market value. The courts have generally decided that you must place the owner in the same pecuniary position as he or she enjoyed prior to the taking. Generally, for residences this equates to:

Fair Market Value + Relocation Assistance = Full Extent of an Owner's Loss

Public Relations

LADOTD has a public relations person in the highway department, but major media issues are handled in the Secretary of Transportation's office. The agency has focused on improved communications with its local public agencies. ROW staff and the FHWA realty officer meet with the LPAs and others involved with the right-of-way process every other month. These meetings rotate through different areas of the state, attendants routinely includes representatives from FHWA, the Corps of Engineers, Federal Aviation Association (FAA), Housing and Urban Development (HUD), U.S. Department of Agriculture, local and state agencies, etc, as well as consultants. Some of these meetings are instructional, featuring seminars and roundtables, others are for sharing of ideas. LADOTD staff believe in incorporating consultants as staff/team members so all can work together. All parties involved have found this type of communication and education tremendously important. LADOTD staff absorb the LPA projects as a normal part of the workload, and LPA staff go directly to the LADOTD for the expertise they need. The more that LPAs learn about the ROW process, the less assistance they require. This has been especially true with the more population.

Public relations in Louisiana also places a strong emphasis on the needs of internal customers. The organization has implemented flextime and compressed time as employee rewards. These options really improve staff morale, which is, perhaps, the most striking feature of the LADOTD operation. The enthusiasm, esprit de corps, optimism, teamwork, and "can do" attitude of the staff permeates the operation and is positively contagious. This attitude might result, in part, from participation in employee activities like King Cake celebrations and crawfish boils. However, one could also see the exceptional staff attitude as a direct by-product of empowerment leading to a "one team, one goal, one mission" perspective.

Training

Training is achieved through various avenues. On-the-job training and mentoring are the main training tools. ROW staff also attend the International ROW Association training classes for professional development, and training is considered a core value of the LADOTD strategic plan. At one time, staff attended FHWA regional workshops—before the regional concept was abolished. However, the five states in this former FHWA region have agreed in principal to have informal workshops and invite FHWA. LADOTD employees contributed valuable information, along with other states, at these meetings.

Project Management

In the area of project management, LADOTD uses a team approach. Once a week, all division directors are involved in a project meeting to discuss project-related issues. Agenda items include, but are not limited to, problems, schedules and project needs. Breaking down the walls between divisions achieves a mutual understanding of other technical areas. Additionally, LADOTD created a new project manager position through civil service to specifically focus on keeping projects on schedule. Staff reported that this position has been highly successful.

Another project management technique LADOTD uses is the joint review meeting. Membership in this group includes two design engineers, three location survey staff (who prepare the ROW maps), and one real estate representative. The meeting gives the engineers the opportunity to comment on the ROW plan prior to design and provides ROW staff with input regarding the letting schedule. The joint committee together decides how it should proceed for access to properties. These meetings came about as a result of the total quality management (TQM) process and employee concerns about problems created by constant revisions to ROW plans. Real estate chairs this group, and all comments generated from the meeting go out for departmental comments. Shortly thereafter, ROW maps are prepared to finalize and process with acquisitions. Before the joint review meetings, the surveying and contracting sections were responsible for checking the accuracy of the ROW maps; now the joint review team handles this responsibility.

Production Tools

Numerous production tools are present in the Louisiana ROW office, but the tool most closely associated with the continuous improvement process is the use of TQM teams. The TQM teaming concept initially came about as a result of a public/private partnership called the Louisiana Quality Initiatives (LQI). Membership included private industry representatives and LADOTD top-echelon managers. This team looked at the top 10 problem areas in the agency and applied the TQM problem-solving process to the top 5. As a result of this activity, the utilities section was moved to the real estate section, solving a utility payment problem and winning the agency a national award. Currently, TQM team members are selected from the employees involved in a particular problem. A formal TQM process usually includes hiring a professional facilitator to ensure that no one dictates to the group. ROW director Jim Dousay felt that the facilitator was instrumental to the success of the process; however, convincing upper management of this need was difficult. According to Mr. Dousay, "Many people thought there was no problem with the process as is—and people do not want to change! Change is going to be constant now. It will be a continuous process." The first TQM team had 11 members who came up with 25-30 recommendations currently being implemented or considered for implementation. Consistent with the continuous improvement philosophy, a TQM team can be formed at any time in the process, with the objective of reducing the work cycle. Employees note, "One of the most critical parts of the TQM process is the plan to implement the recommendations, and upper management must buy off on the process."

An area of great success for LADOTD has been its continuous focus on process improvement throughout the organization. Achievements include a revision of the forms used across the State. Applying the TQM process has pared down forms and made them compatible statewide. Currently, LADOTD is in the process of putting all of its forms and its policy manual on one computer. Baton Rouge is serving as one of the pilots for this automated forms process. LADOTD employees completed a process map for routing procedures and title work. One TQM assignment was to shorten the scope of title research work. Original title work now goes directly to location and survey, as opposed to being sent to headquarters first. This routing process change saved the Baton Rouge district 4 working days. Routing has also been examined in the map preparation area. LADOTD now sends the map directly to the person who needs it, as opposed to those who request it. This one step has saved the agency 10 working days, creating a brief "take off" document that permits the staff to finish the title abstract while the mapmaker is already underway. Other process improvements relate to preparation of sales paperwork and expropriations—ensuring that the terms of the sale are agreed upon before writing it up so the sales paperwork is done only once. Changing the way it does business for expropriations has taken LADOTD's percentage of rewrites from 35–40 percent to approximately 9 percent. Further process changes include eliminating a typing pool of about 20 people and having agents complete their work on computers. With all of these process improvements, the goal is the same—to get projects to construction sooner.

To deal with work overload, LADOTD established the "statewide gang," a group of central office, project management staff that can be dispatched in areas of greatest need. At first employees wondered whether the members of the statewide gang would want to go back out to the field. But they did, and with enthusiasm, helping the whole state work as one team. According to Robert David, real estate project manager, "They prefer the centralized structure. Decentralizing people only creates little kingdoms out there in the districts." Besides traveling across districts, the statewide gang addressed overflow work involving acquisitions. All agents know all aspects of ROW work, as opposed to specializing in particular functions.

LADOTD has also made successful use of consultants as a production tool. With workload projected to double soon, LADOTD plans to hire individuals—as quasi part-time employees—to do the paperwork, rather than a management-consulting firm. About 90 percent of its appraisal work is contracted out, amounting to \$2 million in consultant fees last year. A penalty clause in the contract for consultants imposes a 5-percent penalty per day if the consultant misses a deadline. Likewise, incentives with bonuses are given for completing a project early. Consultants are paid \$500 per day. The consultant then works as a team member, along with LADOTD staff, and may only complete one project at a time. This has decreased processing time while sustaining quality through the appraisal grading process.

LADOTD mails offers to property owners and negotiates offers by telephone. This process change, already used for out-of-state landowners, immediately reduced LADOTD expenses 50–75 percent, and is an example of a simple process improvement. LADOTD also uses a detailed brochure that helps the property owner know what questions to ask. LADOTD also mails out counter offers. This mailing-out process has improved production with no loss of quality and has given clients what they want. Out of 500 contacts ROW staff made with clients, 460 preferred

the mail-out service program over personal meetings. This process change has enabled ROW staff to spend more time with complicated cases requiring personal contact.

Another production tool used by LADOTD is staff empowerment. Downward delegation and empowerment is key. Agents are empowered to negotiate. District managers can settle administrative suits up to \$10,000 without central office involvement. ROW supervisors have also been directed to stay in their offices and supervise rather than doing the work of their subordinates. District managers aid ROW field staff by giving them the tools they need to complete their jobs. LADOTD has also made strategic use of technology for productivity improvement, investing in TV/VCR and camcorder equipment. A staff member videotapes every project from its start. When LADOTD personnel have any questions, they can view the tape. Often the videotape saves staff another trip out to the project site. The tape also serves as documentary evidence if the property requires litigation. Site photos, from 4" x 6" up to poster size, can be generated off the videotape. LADOTD is also purchasing a user-friendly computer system, and will install a PC on each employee's desk.

Internal and External Controls

Project control is handled through assignment of project numbers, contracts and specifications, construction billings, funds tracking, and through the use of a quality review process. Headquarters staff review work at the district offices, a task previously performed by FHWA. Quality review teams visit each district about once a year. LADOTD has implemented approximately 40 policy changes based on input from the districts following these reviews. Audit findings are summarized in a report sent to the district manager involved in the quality review process. The district manager has an opportunity to respond to issues raised. The review is not seen as a report card—but as a vehicle to communicate issues, challenges, and solutions. This quality review process, which started 3 years ago, has resulted in tremendous process improvements. LADOTD is evaluating whether quality assurance (QA) audits should be conducted annually.

Another process change is to have everyone sign all reports, which LADOTD believes to instill accountability and ownership. Additionally, all statistics are checked each quarter, for the number of people relocated, dollars spent, condemnation rate, etc.

Performance Indices

LADOTD's database system is called RAMS—real estate acquisition management system. It was developed about 15 years ago for management purposes; however, it does not really serve well in the area of performance indicators. To examine the type of data system needed, LADOTD now has a dedicated staff member focusing on automation and designing a system to provide an overview of the program and answer the question—where are we and where are we going? The new system will include production, status, and recordkeeping functions.

LADOTD believes that the database/system should also help agents with day-to-day activities such as cost estimates and title work. Any new system created must be "tweakable" to readily incorporate further changes and developments. New system design must take into account many inherently different functions involved in the process. Breakdown in communication prevents parties from getting all the information they need. Technological processes should include reminders for when items "fall through the cracks." A fully integrated data system will show problem areas where TQM processes can be applied and can track successes once TQM solutions have been discovered and implemented. Process changes occurring through TQM should be entered into the data system so they can be tracked and evaluated by the system. While Louisiana is not yet tracking its processes with fully developed performance indicators, the State is well on its way in the conceptual design of a system to further this journey.

Louisiana Planning Model

According to the LADOTD strategic plan, the philosophy of the real estate section is "to serve the transportation needs of the public. We are committed to teamwork, quality, integrity, professionalism, innovation, and excellence in serving our customers."

Goals and objectives directly related to LADOTD's strategic plan include the following:

- Develop and implement management systems.
- Foster communication and feedback focused on quality improvement.
- Continue to improve the working environment of employees.

LADOTD's philosophy is to change a process that needs changing. Staff are not married to any particular process.

The Survey States:
OREGON

OREGON

Oregon approaches the ROW process through a centralized organizational structure with decentralized staff. Regional staff report directly to the central office but serve as technical support for the regions. The State is divided geographically into 5 regions, with the central office located in Salem. The ROW section has an annual budget of \$40-\$50 million and a staff of 105 employees, who generally process 900 parcels a year. About 90 percent of their work involves addressing the critical appraisal process function, with full appraisals required about half of the time (for parcels valued over the level of their appraisal waiver).

The appraisal waiver process in Oregon is referred to as ADVAL (administrative determination of value). The Oregon Department of Transportation (ODOT) estimates that parcels acquired under the ADVAL process about 50 percent of acquisition. This process can be used for uncomplicated properties under \$10,000. The waiver level started at \$2,500 in 1989 but was increased to \$10,000 in 1995. The ADVAL process, documented on a single sheet of paper, requires only a second signature by any senior staff member who is familiar with the project and has values on the project. This process By passes both the central office review process and a 15-day notice requirement that ODOT must give property owners to inspect/appraise their property. Consultants are never contracted to do the ADVAL appraisal waivers; rather, ODOT regional staff perform this function.

Roughly 8-10 percent of parcels will receive a recommendation for Condemnation , referred to as an "RC" in Oregon. Once this occurs, staff evaluate which files are prime candidates for mediation. Of this 10-percent figure, about 2 percent may actually end up in court, with the others reaching settlement. Oregon employs the best-and-final offer 30 days prior to the trial, at which time ODOT must put its best offer on the table. If the property owner still does not accept this best-and-final offer, the case goes to trial. If the amount awarded comes in under this 30-day offer, then the property owners pay their own legal costs. If the amount brought in by the jury is even one dollar over the 30-day amount, ODOT pays all legal costs for the property owner, including the appraisal cost.

The ROW division is located within the technical services branch of ODOT's Transportation Operations Program. The division operates through a management team comprised of the ROW manager and 10 supervisors. Except in special circumstances, members of this team have equal voting rights. Supervisors know exactly what is expected of them, as each supervisor drafts an annual performance plan, tying their goals into five core areas directly related to:

- (1) Management accountability;
- (2) Continuous improvement;
- (3) Employee development;
- (4) Organizational improvement; and
- (5) Customer service.

Once the supervisors have drafted their performance plans, the ROW manager sits down with each one to go over proposed goals before the plan is put into operation. The ROW manager

meets quarterly with the supervisor to discuss progress made and challenges remaining relative to this plan. The ROW manager also brings the management team together annually to brainstorm ideas for consideration as a management team during the next fiscal year. According to Ms. Dee Jones, ROW manager, this approach has generated approximately 30-50 ideas in the past. These ideas are then prioritized, with the management team deciding which ideas to select and implement. Each selected idea is assigned to a different supervisor who serves as the "lead." Accountability for progress on the idea is then folded into that supervisor's performance plan.

Oregon's technical supervisors learned strategic planning skills, how to develop business plans, and how to lead their crews to become a team of technical generalists. They started with a management retreat and used professional facilitators to teach management techniques, team building, and problem-solving strategies.

ROW in Oregon has adapted Edward Deming's philosophy that, "Effective work is not possible without understanding how it relates to the whole." This insight has enabled excellent multidisciplinary communication between all team members and stakeholders. This approach results in a project that meets the needs and is delivered on time and within budget, as clearly stated in ODOT's vision statement. Oregon felt so strongly about customer service as vital to its quality journey that this performance category was incorporated into the employee performance plan, as discussed above. Peter Drucker's philosophy that the purpose of business is to "create a satisfied customer and deliver all of the parts of the enterprise in the service of the customer" is clearly evident throughout ODOT's ROW processes. Its quality systems assure compliance with all laws and regulations, and all processes are clearly identified.

Public Relations

Oregon has a number of tools in place to address public relations. At the onset of a project, ROW staff attend preliminary design meetings, public hearings, and town and neighborhood meetings, showing preliminary design maps for the future road project. The ROW division has produced a number of informational pamphlets and brochures for the public that discuss property acquisition and the public hearing process. Ms. Jones' passion toward customer satisfaction is illustrated through her daily screens of internal and external client surveys to make sure that all customers have been treated fairly. She reads and responds to all survey forms, regardless of what they uncover. If an employee was well-received by an internal or external client, Ms. Jones sends an e-mail to that employee's supervisor and to the employee. If the internal or external client was disappointed with the service, she will discuss the situation with the supervisor, hear both sides, and then contact the customer either verbally or in writing. If this negative comment is the result of performance that can be modified, she will ask that the process be evaluated. Ultimately, her commitment to public relations aligns well with her commitment to client satisfaction.

Training

Training is an area in which ODOT truly excels. New right-of-way employees receive a 1-day new employee orientation session. They visit the central office and meet the staff, so they can learn who people are. ODOT recognizes the importance of relationship building and makes this a priority from an employee's first day on the job. In addition to the new employee orientation process, new agents are assigned a project manager to serve as their mentor. This individual is responsible for answering questions and for guiding the new employee through the ROW process. Employees may also take outside courses, which are fully reimbursable if job-related.

Recognizing the critical importance of the role support staff play in the ROW process, ODOT has also developed a "core curriculum" for them, emphasizing such areas as public contact skills, effective writing and presentation skills, specific computer software classes appropriate to their positions, and an introduction to right-of-way basics. These classes are to be taken within the first 3 years of employment.

A database tracks each employee's progress toward completing these core classes and can print out training reports at any time. All employees taking training courses evaluate their training using a curriculum-input survey. Interest in training has been overwhelming, as has employee input. E-mail is used as yet another venue for employee input.

Perhaps the most impressive of ODOT's accomplishments in the training area is the Project Leader Academy. This is a weeklong, multidisciplinary training program for the agency's project leaders, who are responsible for advancing and developing a project. ODOT has conducted three of these programs and trained about 90 project leaders. The course, conceived by ROW manager Dee Jones and designed and presented by ODOT senior project leaders and technical staff, including ROW, earned the agency an AASHTO Pacesetter Quality Award. The course has spun off a number of sequel courses for project team members and consultants. Most recently, an annual project leader forum was begun to allow trained project leaders to continue to share best practices and receive updated procedures and tools. Other states have expressed interest in adopting this type of program and numerous management employees stressed the desire to attend this excellent project leader course as well. The Project Leader Academy allows for cross training cross division experience. This training was so successful that the ROW manager is now envisioning a training academy specific to ROW processes.

In addition to the formal training program, ODOT has a number of day-to-day training experiences that occur in meetings and through the e-mail system. Monthly staff meetings feature training issues as a standard agenda item. ODOT also holds statewide ROW meetings every 18 months, where all right-of-way staff meet for training sessions and share best practices with each other. In addition to formal training programs, individual training plans are prepared at the regional level and approved by central office as part of its business plan. Regions may also share training dollars across regional lines as long as they stay within total resources allocated for the training function. Portions of the ROW manual are available on-line on a shared directory, and policy memos, clarifications, and relocation meeting minutes called "Andy-grams"

are frequently circulated and stored electronically. These minutes were affectionately named after the long-time staff member who began circulating them.

ODOT also has a number of user groups in place. The relocation key advisor committee meets every 2 months and provides a learning environment, a look at efficiencies, and a training function. The FHWA right-of-way officer is a member of this team. Based on the committee's success, an appraisal advisory committee has now been formed. It has met three times and is looking at revising the appraisal forms that staff felt had become antiquated. Even the area of employee discipline includes a training element. When a behavioral change is necessary, the supervisor/manager works directly with agents who may be having a problem, using a coaching approach to handle discipline matters.

Project Management

ODOT uses a team approach in the area of project management, and has produced a document to guide this process: The Oregon Department of Transportation Guidelines for Project Teams, issued in November 1997. Project teams were established so that every project in the current STIP (Statewide Transportation Improvement Plan) had a project leader and team. All projects are developed using this approach, and design decisions belong to the project team. Right-of-way parallels this concept, having assigned a project leader to every right-of-way project in the current workplan. This internal project team in ROW focuses strongly on project management philosophies, which results in project managers who are both accountable and responsible for the projects they complete.

The basic elements of the ODOT project team process include assigning a designated project leader responsible for project delivery according to a business plan date, adhering to an authorized construction budget, and establishing the scope of the project. The project team is responsible for delivering all components of the project, including workplans, budgets, schedules, project decisions, and technical excellence. These elements are clearly part of an effective project management system. The project team establishes strategies, resolve issues, and ensure informed consent from project participants and stakeholders. Team composition will vary from project to project depending on the size, the type, and the complexity of that project.

The project leader, on the other hand, must be able to negotiate work items and schedules with the project team. Project leaders, trained through the Project Leader Academy, must be able to recognize conflicts before difficulties emerge and possess skills for conflict resolution.

An operational change within right-of-way to parallel the project leader model has provided strong support for a past decision regarding staff utilization. Initially, ROW staff tended to be specialists in a specific ROW functional area, such as appraisal or property management. This approach shifted to a generalist concept that crosses all specialty areas of a given project. The shift towards multidisciplinary teams has enabled the ROW personnel to focus on the overall project. Cross-functional teams have given ROW personnel excellent project management skills, although expertise in specific areas may be lacking for expert witness cases. Some personnel

have urged the provision of refresher courses in given areas so that generalists can still become experts in a given specialty area.

Project management, as a multidisciplinary approach, can also be a double-edged sword, with projects that never proceed forward. For example, Oregon's District 1 office initiated a HWY 217 project in 1989 and involved the design group, ROW, and the Environmental Division. Three years later, the designs came back and put project well over the estimated budget provided in 1989. The project needed to be re-evaluated to incorporate a value-engineering approach. Five years into this process, there still was no project, although many ad-hoc teams had been formed to address a series of public hearings during the development phase.

One of the most promising project management tools encountered was the Optimum Workload (OWL) team within right-of-way. This group, comprised of the five regional ROW supervisors and several ROW supervisors from headquarters allows the supervisors to examine each region's workload for possible sharing of staff and resources. With this fluid sharing of staff across regional boundaries, workload fluctuations can readily be accumulated with a simple redeployment of staff. The OWL team has fostered trust among the regional supervisors so that loaned staff are no longer the weakest link in the staff chain. Staff can also bring technical issues to OWL meetings for input and problem-solving opportunities. The team meets once a month to look at the workload demands in each region.

The ROW management team also meets monthly so all five regional supervisors and all five central managers can discuss policy, efficiency, and legislative issues. This meeting occurs the same week as the OWL team meeting. Strategic quality management occurs at these meetings, where once a year, managers generate process improvement ideas and prioritize what they want to work on that year. Project management is further enhanced by a liberal delegation of authority through the organization. The ROW manager recognizes that one person cannot possibly approve all matters of business and readily delegates authority to the management team. Clear instructions regarding vested authority are provided in writing to clarify roles and expectations and to expedite the ROW acquisition process.

Production Tools

ODOT also excels in the area of production tools. There are traditional production tools in place, such as e-mail, fax machines, training manuals, training conferences, advisory committees, and project teams. In addition, staff members have CDs with metro scan information sorted by county, multiple listing services (MLS) on line, and the Internet. ODOT also has an Intranet in place, which links all of the departments and the Oregon revised statutes (ORS).

Perhaps the most remarkable production tools in place are the database system and the mediation process instituted to settle cases prior to trial. The initial database system was called the ROW information management system (RIMS), which ODOT hired a consultant to create. This system proved to be less than satisfactory, with employees complaining about the difficulties in using it. Even though the organization had already invested about \$1 million in the system, the ROW manager discharged the consultant and began from scratch. A needs assessment was performed,

and within 15-18 months a full-scale system, along with the associated training, was in place. On-line help is also available.

The new system was named RAIN, for right-of-way automated information network. The ROW manager asked ODOT's information systems branch (ISB) for help in designing a system that would meet their needs. An ISB consultant interviewed the regional office staff to solicit important performance characteristics and to encourage them to think about what they ultimately wanted the system to do. The new management system cost about \$500,000 and, according to staff, it completely changed the way they do business and an increase in productivity. The system was so well received that ODOT has released the 2.0 RAIN software system and is working on future releases. The RAIN system handles critical data storage, task assignments and tracking, automated production of all acquisition and relocation forms, and production of needed management performance reports.

Oregon also has a mediation process in place for cases heading to trial. A specially created position in the ROW division for an alternate dispute resolution coordinator (ADRC), was filled by a former Department of Justice condemnation attorney; who is familiar with the legal underpinnings of the condemnation process. A case can be considered for mediation if the negotiator reaches an impasse with a client. The file is then forwarded to the ADRC, who determines if the file is ready to go and if mediation is appropriate. The ADRC then contacts the property owner and offers the opportunity for mediation and explains its benefits. If the property owner is agreeable, the ADRC hires a mediation coordinator, sets a date for the mediation, and advises the respective parties of the designated time and place. ODOT representatives remain in one room, and the property owner and counsel, if desired, remain in another room. The outside mediator runs the meeting and carries compromise offers between the two rooms. Generally the process takes 8-10 hours.

According to ODOT staff interviewed, this process has been highly successful, saving hundreds of thousands of dollars. Of 10 files going to condemnation, all but one was settled. According to one regional supervisor, Rodger Jarmer, "The mediation process has resulted in a process improvement on my part. It makes me recognize how to train negotiators better. Mediation saves thousands of dollars. The mediator helps settle the file so we can do our work much faster. There was an improvement in legal fees and a speeding up of the process through the use of mediation."

Internal and External Controls

Numerous internal and external controls in place at ODOT are key to the successful implementation of ROW activities. Checklists, time schedules, and standards for specific processes and procedures are all in place and readily available for staff use. Employee input is regularly encouraged and actively sought, with input opportunities available through various means, including electronic mail, so that individual employees may use the tool they are most comfortable with. All employee suggestions receive a response. Employees are thanked for their suggestions and encouraged not to give up and to keep trying. Once employee suggestions come to the management team, they are prioritized. This process has generated many

improvements. It is the philosophy of the ROW manager that, "Process improvement must be a mindset. It must be continuous. We must create the environment that fosters a forum and a place for employees to bring their ideas and know that they will receive thoughtful consideration." Evaluation forms for in-house training are sent via e-mail to participants. ROW has also developed a form for supervisors to give to their staff so that employees may evaluate their supervisor's performance. Internal and external customer service surveys are routinely used as well. External surveys are mailed out to the property owners, along with the check for the property, and are also sent to all displaced individuals and families following relocation. The surveys receive about a 75-80 percent response rate. Ms. Jones reviews all customer satisfaction surveys and congratulates employees on superior performance or follows up directly with property owners having a complaint. If a negative pattern develops with a specific employee, she notifies the employee's supervisor and works with the employee in a coaching manner. At the regional level, if a negative comment is received from a property owner, the regional supervisor will review the diary-contact sheet to surmise what happened in the conversations. Staff take these comments as constructive criticism and incorporate them into their processes as part of continuous improvement efforts.

Internal customer surveys are sent annually to all divisions. This process has been in effect for about 5 years. Because their product affects others within the department, regional supervisors are asked to prepare a list of all internal customers they have contacted, so surveys can be sent to them.

Ms. Dee Jones likes to recognize employees as often and as differentially as she can. She will write a personal letter to employees to recognize superior performance or achievement. She then sends a copy of this letter to the deputy director, the employee's supervisor, the regional manager, and her own supervisor—who then sends a personal e-mail to the employee and congratulating the employee on behalf of the department.

Performance Indices

A sub-group of the management team has identified and implemented ROW performance measures. A quarterly performance measure report is issued to all ROW management to show progress in achieving these measures, which are continually reevaluated and updated as needed. Monthly budget status reports are compiled and distributed to ROW management to provide needed budgetary information. Each program budget is tracked, along with approximately 150 individual project budgets that typically make up the division's annual workplan. A special staff position was created to be responsible for the ROW budget and performance measures. Further performance indices include a process to document efficiencies gained for later collation. Efficiency documentation forms provide areas for staff to record efficiencies achieved in five categories:

- (1) Cash savings;
- (2) Cost avoidance;
- (3) More output with same input;
- (4) More quality with same input; and
- (5) Other.

These forms are collected, collated, and summarized in monthly reports showing the continuous improvement process in action.

Oregon Planning Model

Oregon reveals a success story in strategic quality planning, with personnel who know exactly what is expected of them. Each supervisor annually drafts a performance plan that tie goals into five core areas directly related to the mission of each one's area of responsibility. Once the supervisor has drafted the performance plan, the ROW manager sits down with the supervisor and reviews the proposed goals for the period and how they fit into the overall goals of the division. The performance plan is then finalized and put into operation.

The ROW manager meets quarterly with the supervisor to discuss progress made and challenges remaining in this plan. The ROW manager also brings her management team together annually to brainstorm ideas they would like to take on as a management team for the next fiscal year. These ideas are then prioritized, with the team deciding which ideas to select and implement the following year; each selected idea is assigned to a different supervisor to serve as the "lead." Accountability for progress on the idea is then folded into that supervisor's performance plan.

The Survey States:

PENNSYLVANIA

PENNSYLVANIA

The ROW function in the State of Pennsylvania is carried out using a highly decentralized governance structure. The central office provides support to 11 geographic districts that include 67 counties. Decentralization has led to a wide variety of approaches across the State. The Pennsylvania Department of Transportation (PennDOT) has led the way, along with its partners, in developing, maintaining, and enhancing a seamless system of transportation services and facilities. The primary responsibility of central office is quality assurance, with quality control handled at the district level.

ROW is part of the Bureau of Design (BOD) in Pennsylvania. The ROW division has an annual budget of \$21 million and statewide personnel of approximately 125 people. It processes approximately 3,000 parcels per year. The appraisal waiver authorization level in Pennsylvania is set at \$10,000, which covers approximately 74 percent of the parcels handled each year. Of the total number of parcels acquired, approximately 23 percent will require a recommendation for condemnation.

The overall PennDOT organization began a significant reengineering initiative in 1995. The reengineering process required the agency's 17 teams, one of which is ROW, to redesign their processes. As a result, benefit options, technology opportunities, and implementation plans were developed. Additionally, PennDot developed six cross-process teams to address reengineering of (1) statewide QA/QC plan model; (2) the FHWA exemption agreement; (3) training and certification; (4) legislative, regulation, and outside agency changes; (5) task database; and (6) policy and procedure changes. The process improvements implemented are expected to save PennDOT \$225 million dollars within 8 years of their deployment.

During the 1980s and early 1990s, PennDOT made great strides in upgrading its highways and bridges. In 1995, Governor Tom Ridge, along with an executive committee, developed a transportation strategic agenda for the state called "Moving PennDot Forward: A Handbook." This handbook was prepared for distribution to PennDOT's key stakeholders, management, and employees. The overall transportation policy in Pennsylvania was designed to address eight strategic goals, as follows:

1. To have a "maintenance first" philosophy for transportation systems and facilities that not only reflects, but anticipates customer expectations;
2. To create an intermodal transportation system that strengthens Pennsylvania's competitive position and provides convenient, efficient, and environmentally responsible choices for the movement of people and goods;
3. To promote the delivery of quality products and quality customer service in everything PennDOT does;
4. To invest strategically so as to achieve a high level of transportation services and economic return;
5. To identify and implement technological improvements that support the strategic direction of PennDOT and the Commonwealth;
6. To maximize transportation safety through improved design, enforcement, and educational activities;

7. To foster ongoing communication with our partners and customers to improve the delivery of services; and
8. To encourage all members of the organization to move PennDot forward in a team effort to achieve these goals.

As an outgrowth of these strategic goals, PennDOT began developing its continuous improvement system using the Edosomwan-Baldrige-based assessment tool (EBAT). PennDOT selected EBAT, because it wanted a management system that was customer-driven and quality-focused. EBAT, focuses on leadership, offers continuous improvement and learning, values employees, and promotes a quick response to customer needs.

A PennDOT's Baldrige journey was initiated with a cursory assessment. During this cursory assessment each central office bureau, each engineering district, and one county maintenance organization in each district conducted an initial assessment of its organization using the EBAT II,. This assessment entailed forming teams of process owners (employees), customers, suppliers, and union representatives, and allowed team members to identify their organization's strengths and opportunities—or gaps. The teams identified three to seven opportunities, or gaps, forming gap closure teams for each. In summary, the EBAT II, served three purposes: (1) it provided each organization with an introduction to Baldrige criteria and an experience with the gap closure process; (2) it provided each organization with "quick strike" opportunities to address identified gaps; and (3) it provided the necessary time to determine how to apply the Baldrige-based criteria to PennDOT's specific criteria. Dr. Baker-Betz, PennDot's Division Chief of Performance, summarized by saying, "PennDOT's vision was for a strong future with a long-range view to make commitments to customers, to employees, to suppliers, to the public, and to the community. Our long-range view of the future focused on planning for the changes in new business opportunities, customer expectations, technological developments, as well as in regulatory and statutory requirements."

Public Relations

The ROW Division has a number of tools and processes in place that assist the group in meeting the needs of internal and external customers. As in most of the other States studied, the ROW personnel in Pennsylvania commonly attend preliminary design meetings, public hearings, and town meetings, where maps with are rolled out to illustrate the impact of the proposed highway design on individuals. Pamphlets and brochures help staff explain the acquisition process and allow the division to effectively communicate its roles and responsibilities to the affected public. Bulletin 47, A General Guide to the Relocation Assistance Program of the Pennsylvania Department of Transportation, provides information to property owners who will be relocated as a result of a transportation project. It was newly revised in January 1999.

The ROW division and Local Public Agencies (LPA) have clear lines of communication. PennDOT published a guide, "Local Public Agency Acquisition of Right-of-Way"; Publication No. 98, (November 1998) to clarify LPA responsibilities regarding State and Federal policies and procedures.

Another program implemented by the organization, specific to ROW, is the payment required by State law, to the property owner of up to \$500 for a third-party attorney or appraisal expert to give their opinions to the property owner. The ROW division found that investing this money on the front end of the project was effective in lowering the total life cycle cost of land acquisition. The program's success prompted legislative discussions to raise the dollar limit to \$2,500; however, this legislative issue did not pass. Of special note are PennDOT's statewide agility meetings, which are a forum for obtaining external input. The citizen's advisory board meetings provide yet another mechanism for public relations and customer input.

Training

PennDOT began its quality initiatives more than 18 years ago. Team involvement over the last 5 years has resulted in the development of an excellent training program. PennDOT uses a top-down training approach and is committed to achieving success in the implementation of its management system. Examples of this commitment include the 7-minute video completed by Secretary Mallary, which describes the PennDOT quality journey and his weekly newsletter on quality issues. In fact, AASHTO recognized PennDOT's level of commitment with a quality award.

PennDOT sponsored a statewide mid-manager training session for 750 mid-level managers in Bridgeville, Pennsylvania. This training identifies the tasks necessary for implementing the EBAT,. Thirty-two employees were trained to serve as internal Baldrige examiners. To demonstrate executive staff commitment, this training was followed by two additional 3-day examiner classes, with attendance required for the Secretary, all deputy secretaries, the chief engineer, every bureau director, and all district engineers. PennDOT currently has 125 internal Baldrige examiners and is recruiting an additional 25. With the examiner training completed, 725 mid-managers received training to gain a clear understanding of the EBAT criteria, to reinforce the dependence of success on mid-manager acceptance, and to prepare mid-managers to train the balance of employees on the EBAT criteria.

In addition to the traditional Baldrige training, PennDOT made available a facilitated method called the self-assessment gap analysis (SAGA), but determined that the SAGA process was better suited for county maintenance organizations; whereas, the traditional Baldrige application was more appropriate for the central office bureaus and engineering district offices. The SAGA process is a 3-day workshop where participants assess strengths and opportunities in relation to the EBAT II criteria. This exercise is aimed at encouraging those in attendance to determine the processes they currently have in place, identify the processes that need to be in place to become a world-class organization, prioritize the identified gaps, and create action plans to close the gaps.

The ROW central office, in coordination with the districts, has developed a core curriculum for all ROW positions. Individual training histories are entered into a training database called Tutor, which ROW staff developed in 1997. Since then, they have worked with local universities and consultants to develop and provide the training needed. The PennDOT ROW staff have taken an aggressive approach to training, with a substantial amount of resources and time committed to this endeavor.

Project Management

PennDOT has a unique vision for project management and is in the process of using project management software called Welcom®'s Open Plan. This software was selected by a PennDOT task force, that included personnel from the Bureau of Design, Bureau of Information Systems, Bureau of Construction and Materials, and the districts. The task force invited representation by personnel familiar with design and construction. In February 1999, District 8 ROW staff believed that this software would be implemented in approximately 6 months.

As part of reengineering efforts, 17 teams modernized PennDOT's Engineering Management System (EMS). PennDOT strives for greater integration among design, construction, and maintenance early in the process. A project driven approach allows more delegation of approval and review to districts and provision of a project team. Establishing project teams results in a faster pace for the project with more unity among design, construction, and maintenance functions. This approach has involved a tremendous effort to train the project managers. A project manager at PennDOT has many responsibilities: assembling the project team across all organizational boundaries, including consultants as necessary; conducting the engineering and environmental (E&E) confirming the scope of work; and assembling the project's quality development plan (QDP), which begins with a kick-off meeting for the team. Planning the project entails developing the project schedule, assembling the design team (with assistance from the district functional unit managers), analyzing the risk, and adjusting the project plans accordingly. The third phase involves the actual work of design and plan preparation. The design team provides feedback to the project manager on issues of costs, schedule, and hours.

In the preliminary engineering stage, investigation of utilities and right-of-way issues can help with project scheduling and budgeting. Operating as part of a project-driven team, the project manager is tasked with overall project completion. To test this project management approach, PennDOT's District 8 served as a pilot. District 8, with 300-plus jobs in design, put all 300 jobs through a team process headed by a project manager. There are currently two components of the project: a consultant liaison to manage consultants, including deliverables and plans, and a functional support unit, which includes ROW, soil, utilities, surveys, structures, traffic, maintenance and construction divisions. The assistant district engineer for design establishes 90 percent of the letting dates. The liaison engineer will most likely be the portfolio manager. District 8 is the only district thus far that is requiring consultants to complete training and to use the project management software Welcom®. This requirement enables the consultants to interface more efficiently with PennDOT. Welcom® will be networked within the next 6 months.

Production Tools

PennDOT has a number of noteworthy production tools. Over the last 18 years, PennDOT has had systems and processes in place to capture employee ideas, including input from the "Suggestion Connection," the "Ideas Bank" in Harrisburg, and the many different quality teams and committees formed from internal surveys. Given its belief that an organization's success

depends on the knowledge, skills, and motivation of its workforce, PennDOT wants to know how its employees perceive their work environment and whether they feel they have the right training and skills.

Internal surveys have contributed to the agency as production tools and have led to process improvements, whether "quick-strike" remedies or efforts led by teams. According to Steven Koscelnak, District 11's quality coordinator, employees are surveyed to obtain their input on the work environment. The Organizational Climate Survey, conducted by the Penn State University, has been distributed for at least the last 3 years. In 1996, PennDOT learned from employee feedback that the survey was too long; it therefore refined and shortened the survey to elicit greater employee response. In 1997, PennDOT received a response rate exceeding 42 percent of employees surveyed. After PennDOT allowed employees to complete the survey during his or her work time, the response rate increased to 60 percent in 1998.

PennDOT realizes it is not the number of completed surveys that is important, but the information shared in them. To make use of this information, PennDOT selected the top 3 issues and assembled 3 teams to address them. In the 1998 survey, employees mentioned teamwork, outlook for change, and decision-making as three areas for work environment improvement. Each team or committee was tasked to come up with three solutions for each issue. Comprised of volunteers, these teams use the six-step approach to problem solving: identify the problem, diagnose the problem, develop problem solutions, select problem solution, determine how to implement the solution, and determine how to evaluate whether the solution will work. The teams consider all policy barriers and, depending on the timeframe and goals, either meet weekly or monthly until they come up with the top three solutions. PennDOT believes employees have always been committed to quality management efforts and that only the type of management system used has changed. In 1997, AASHTO recognized 18 teams, with 2 teams receiving the Exemplary Partner Award. In 1998, 5 teams received this award.

Another production tool is PennDOT's use of internal needs assessments. The agency also uses external feedback received from citizens advisory board meetings, lessons learned by networking between districts, and statewide agility opportunities as tools of change. Pursuing the Baldrige-based management model, PennDOT is also in the process of developing many new customer-input forms for its quality initiative efforts.

An engineering and construction management system (ECMS) is a top-down approach for determining functional implementation priorities. Another AASHTO quality award winner, the ECMS has about 45 concept input modules and allows electronic invoice submission as well as invoice review and payment. It also seeks opportunities to change regulations, policies, and laws and helps shorten the environmental clearance process. For example, if the focus is on a project-driven document and process, then ECMS will assist the user in developing detailed-designs to address environmental issues, obtaining early agency and public involvement, using the latest technology database, and reducing the size of the clearance document. Using input from across the organization, central office is working extremely diligently to develop ROW job process descriptions and ROW checklists.

PennDOT communication tools include the quarterly In-Road Magazine, distributed statewide; the Secretary Weekly, which illustrates top management commitment to quality; engaging newsletters prepared by the districts, bureaus, and counties; and "Baldrige Round-Ups," which go out with every employee paycheck.

Internal and External Controls

PennDOT recognizes that a key to implementing any successful system is establishing internal and external controls. One is the ECMS. Another is use of a pilot study phase to test the EBAT II criteria. A lesson learned is that processes need to be developed based on the organization's needs. It was apparent that the organizational review package used by central office bureaus and engineering district offices was useful given the multiple functions of these organizations. The counties used a gap analysis tool because it was the best tool for the county organization. This internal control process has brought about information and teams helpful to the agency. Additionally, the Quality Management Manual for Project Development references PennDOT's QC/QA practices and procedures, and the agency's internal surveys serve as excellent internal controls and agents of change.

PennDOT solicits direct feedback from its external customers through citizen's advisory board meetings and a process called "agility." Agility involves the sharing of municipal resources, or trading on a statewide basis, and might include how PennDOT works with or for the LPAs, for example.

Performance Indices

PennDOT has been measuring performance indicators for at least the last 4 years. Penn State University tabulates the employee training courses and provides personnel with employee information based on each employee survey question. Using a statistical trend analysis, PennDOT can evaluate each course and each course instructor based on employee input. Additionally, the involvement of each district's quality coordinator with the surveys allows for modification of course content or instructor based on employee recommendation. Other performance indicators include employee surveys on work environment. Performance indices from a ROW perspective measure projects in terms of whether they were let on time, the number of projects, and the cost of those projects. PennDOT measures the cycle time on the contracting process, the cycle time on reviews (appraisal reviews), the filings of declaration of taking, and the filings of deposits into court. The agency is well on its way to measuring the correct indicators of performance.

The Survey States:

WISCONSIN

WISCONSIN

The real estate program operates under a decentralized model within the Wisconsin Department of Transportation (WisDOT). The mission of WisDOT is "to provide leadership in the development and operation of a safe and efficient transportation system."

The Division of Transportation Districts (DTD) in Wisconsin contains eight autonomous geographic districts that vary to some degree in their individual structures and/or assignments of program responsibilities. The RE offices within these eight districts have a total of approximately 90-100 staff, who are responsible for RE activities within the assigned geographic area.

The Bureau of Highway Real Estate (BHRE) in the central office is part of the Division of Transportation Infrastructure Development. BHRE has 18 RE staff responsible for facilitating and implementing policy and procedure and for providing training and functional guidance within RE and WisDOT. ROW staff in the central office numbered 25-30 people 20 years ago. This number has been incrementally reduced to the current 18 through operational budget cuts and attrition. Within the bureau are two operational sections in which ROW processes are carried out: the acquisition and services section and the appraisal/relocation/property management section.

According to staff providing input, the decentralized structure provides flexibility and makes the individual districts more receptive to piloting new ideas. WisDOT's decentralized quality management model appears to incorporate the philosophies of Crosby, Deming, and Drucker in the overall quality management system. WisDOT has successfully completed Crosby's four absolutes of quality management: (1) conformance of quality systems to necessary requirements, in this case, Federal/State laws and regulations; (2) evaluation and identification of all processes; (3) a quality standard similar to the zero defect approach; and (4) a system to measure quality improvement.

Having done a great job of understanding the importance of measuring of its continuous improvement processes, WisDOT is ready for strategic goal setting and planning. WisDOT's system measures performance through identification of 10 proposed performance indicators, which are tied to outputs, outcomes, and consequences of the highway RE development program. The philosophy behind this system is that performance indicators should not be evaluated individually, but as an integrated set of tools to improve work processes and to further better decision-making. The indicators also give the agency an excellent baseline to begin its measurement processes.

The ten measurement criteria are:

1. Property costs: percent comparison of actual costs to budgeted costs;
2. Project acquisition time: number of projects certified clear by scheduled letting date;
3. Labor or delivery costs: percent comparison of actual labor costs to WisDOT's delivery standard;
4. Customer service: a survey sent to property owners to measure their satisfaction with customer service;

5. Revised offers: the number of offers revised due to market justification in a fiscal year;
6. Condemnation rate: the percentage of parcels condemned in a fiscal year;
7. Administrative revisions: the number of offers revised for administrative purposes and the amount of dollars allocated to those administrative revisions in a fiscal year;
8. Appeal rate: the number of appeals received in a fiscal year and the cost of litigation;
9. Surplus land sales: the increase or decrease to the statewide inventory during the fiscal year; and;
10. Complaints: the number of real estate related complaints received by the Governor or Secretary of Transportation.

WisDOT, like the other States, realizes that a critical component in securing right-of-way is the property appraisal, a process that establishes the value of the property to be acquired. Relatively simple, inexpensive properties are referred to as nominal parcels in Wisconsin. WisDOT estimates that nominal parcels currently represent about 60 percent of its workload in the appraisal area. Securing nominal parcels can be expedited through use of the appraisal waiver, a simplified valuation process. Initially the limit for the appraisal waiver process was set at \$2,500 by Federal regulation. However, in a 1996 study, Wisconsin suggested that if the limit were raised to \$5,000, another 8 percent of the appraisal workload would be absorbed into the nominal process and thereby improve efficiency. Of the estimated 40 percent of parcels over \$5,000 that require a full narrative appraisal, the specific appraisal may or may not be contracted out and/or require central office involvement. During negotiations of an appraised parcel, Wisconsin provides the owner with a copy of the State's appraisal. Wisconsin statutes also give owners the opportunity to hire an independent appraiser of their choice, which the State pays for if certain guidelines are met and the appraisal fees are reasonable.

The degree of contracting for appraisal work varies from district to district, although it is estimated that about 75 percent of appraisal work is contracted out. WisDOT staff generally perform the other important functions of right-of-way negotiation, acquisition, relocation, and condemnation, with small percentages of these services contracted out.

Roughly 5 percent of parcels will require condemnation for a variety of reasons. Of this 5 percent, only 5-6 percent will involve litigation to resolve differences and reach settlement with the property owner. If the property goes to condemnation court proceedings and the jury or commission decision comes in at 15 percent or more above WisDOT's highest written offer, then WisDOT must also pay for the owner's associated legal costs. The Wisconsin Department of Justice defends WisDOT in these matters, and WisDOT pays for costs of legal representation, expert witnesses, and employee staff time.

Public Relations

In the community relations area, WisDOT also has useful tools in place. The agency produces informational pamphlets and brochures that describe the acquisition and relocation processes and outline the rights of landowners under Wisconsin Eminent Domain law. Further efforts include a

guide entitled *In this Together*, were designed to help Wisconsin businesses sustain during highway construction.

Because LPA's are one of Wisconsin's customers, WisDOT also produces a right-of-way acquisition guide for them. This reader-friendly guide summarizes LPA process requirements under Wisconsin law and FHWA standards—to facilitate the LPA-WisDOT partnership.

Staff at WisDOT's District 1 office discussed the public relations process used to inform the community as a whole about proposed projects. The process includes a public information meeting, where detailed information is discussed regarding the proposed highway project, its location, and its effect on specific properties in the ROW corridor. A presentation is made to all attendees, with questions and concerns encouraged and considered. District 1, like all of the districts, employs one public information officer to handle public relations and media matters. Having one designated staff member helps ensure a uniform message to the public and an appropriate address of property owners' concerns.

Training

A statement training committee was formed in January 1995 following a discussion of training needs at a real estate management meeting. Although the WisDOT real estate training was seen as outstanding, the committee was charged with making its training program even better, an example of quality improvement at its best. The committee adopted a goal to "develop and implement a comprehensive, logical, and progressive training program for all DOT real estate personnel." It identified nine functional areas of expertise needed at three different skill levels, and established core competency courses geared to the needs of staff at any technical level. It documented responsibilities for identifying specific training needs each fiscal year, coordinated the scheduling of courses to address those needs, and included a recommended timetable. The committee also produced a real estate training manual and recommended a process for establishing a computerized, LAN-based system for tracking training records. BHRE's advanced real estate specialists are primarily responsible for training in their areas of expertise and may draw on other district real estate specialists and management for training needs. In an attempt to work smarter, WisDOT is developing course shells that it can tailor based on need, rather than having to re-create and redevelop training materials. Recently, BHRE created a position to coordinate this effort, as well as to analyze, recommend, and coordinate appropriate training forums.

WisDOT conducts statewide training conferences every 18 months, involving all RE staff. The conference is designed to bring together both district and central office staff to network and to generate a feeling of statewide partnership. The conference devotes time to a general session, which provides staff with more global (departmental) information, usually through presentations by division administrators, and updates on issues that impact real estate as a whole. Along with formal training classes and other forums offered during the course of the year, at least one full day of this 2-day conference is devoted to breakout sessions designed to meet some of the needs identified during the previous year.

Another forum for training is the special quality circles or user groups in place for the functional areas of relocation, property management, LPA coordination, litigation, and real estate automation. These user groups include one specialty agent (e.g. litigation agent for the litigation users group) from each district and central office. They meet quarterly, or as issues dictate, to discuss shared strategies and problem-solving techniques for issues within their functional areas. They generate new ideas and best practices to present to management and surface shared experiences from functional area experts. As a result of user group meetings, at least one publication and numerous process changes have occurred. According to Ms. Deanna Walsh of central office, sharing and mentoring through the relocation users group, for example, has resulted in the traditional 5-year training period for new relocation agents being reduced to approximately 1-2 years.

Project Management

Through its interagency effort to develop ad-hoc work groups in the District 2 Waukesha office, staff there have created a work environment that provides a comprehensive understanding of the importance of the entire project, from project design through construction. The District 2 project management team concept is an excellent example of cross-boundary communication, much like Deming's model, that stresses the importance of extending communication across different units and divisions. This multidisciplinary team was established to make sure that each project is let on time and within budget, but more importantly, to ensure fair treatment of the client throughout the process—a critical ROW focus. These project management teams have fostered an environment of candid and direct communication that elucidates the roles and responsibilities of each unit and provides a forum for problem-solving opportunities. Once candid communication in an interdisciplinary team is established, a mutual respect for the other's work processes can develop.

Particularly interesting is the project management team concept found at the District 4 office. Two District 4 management personnel discussed their project management approach, wherein it was obvious that the district's quality management philosophy permeated the office. An expressed need for cross-boundary training throughout WisDOT created an environment of mutual respect and an understanding of working and project teams. Incorporating the team approach enables all the engineering design, ROW and construction staff to understand their respective goals and roles.

Production Tools

WisDOT has a number of noteworthy production tools. The agency has established an excellent training program that will result in continuous improvement for its employees. The mentoring and problem-solving quality circles or functional user groups is a tool that adds value to the right-of-way process. The Real Estate Automated Data System (READS), a tracking and production system, allows the user to obtain status updates on any parcel and will result in less

time spent manually tracking these details. Any piece of data can be merged throughout various reports, letters, and documents, thus reducing rewrites and clerical processing time.

District 1 initiated a process, called a blitz procedure, for noncomplex or nominal parcel acquisitions deemed appropriate. This process involves an informational meeting specifically for impacted property owners. At this meeting, proper WisDOT appraisal and acquisition procedures and expected correspondence are all explained to the property owners. Informational packets are prepared and given to attendees so that they may follow along during the discussions. A question-and-answer session is also held to clarify any points, and is followed by one-on-one negotiations with these property owners. The blitz meeting allows district personnel to convey consistent information to a group of property owners and offers the potential for acquiring 30-40 parcels in one day. It also achieves the goal of personally meeting with affected property owners to address their concerns, present them with offers, and sign people up, on the spot, if they are in agreement.

WisDOT has also created a real estate estimating tool, referred to as the matrix. The matrix allows management to more accurately predict staff needs and workload on proposed or pending projects through establishing individual cost estimates for individual real estate activities. The estimate is calculated by multiplying the number of person days required to do specific jobs by WisDOT's real estate workday rate for the fiscal year to generate a funding estimate for the project. The estimate is also used as an internal tool to evaluate the price proposals of outside consultants.

Internal and External Controls

Key to implementing any successful system is establishing internal and external controls. The WisDOT BHRE has begun conducting annual quality assurance reviews, patterned after Florida DOT's quality assurance review process. These reviews are intended to replace project-by-project approvals, which added another layer of oversight and have, in the past, caused production delays. The review will be conducted using BHRE advanced specialists and occasionally district specialists. As part of the process, BHRE makes recommendations to the districts based on the findings. The districts then will provide a corrective action plan discussing the remedies as they pertain to continuous improvement. The reviews are also used to identify best practices used by various districts.

WisDOT has done an excellent job of identifying the needs of its external customers (property owners) through the use of customer satisfaction surveys. Each district distributes a survey to a parcel owner after acquisition or relocation. Surveys are returned to central office, where responses are entered into a database and routed to the specific district for review. Each district is responsible for responding to surveys and for addressing specific issues requiring attention through letters, telephone calls, or customer visits. To date, survey responses have indicated customer satisfaction with the ROW staff's service.

Performance Indicators

Of particular interest is real estate's establishment of a system of performance indicators designed to assess how the WisDOT RE program is performing and where process improvements are needed. A cross-divisional team developed this system by evaluating processes and selecting indicators that they believed were most representative of the RE program elements. WisDOT's 10 performance indicators to serve as the mechanism for measuring program and process quality performance. The indicators are useful in setting quality achievement program goals.

WHERE DO THEY GO FROM HERE

WHERE DO THEY GO FROM HERE

These five states shared their quality management systems with the FHWA in an effort to communicate the lessons learned as well as the benefits gained during their system development and implementation. The surveys and quality evaluations of these states reinforced the existence of several unique key elements, on which the design and implementation of each agency's management system depends—specifically their mission and objectives. This finding emphasizes the need for each state agency to take its own unique approach to a quality management system.

Florida

FDOT's management system is fully implemented, with many excellent performance measures that illustrate that quality management systems work. Florida, like Louisiana, Pennsylvania, and Oregon, also has multidisciplinary project management and a project-driven system. Florida has an excellent mandatory employee training program that covers all functional areas and requires a 2-year employee commitment to complete 4 segments of 6 months each. Florida has quality teams for each and every discipline, including the training team, which meets quarterly.

Louisiana

LADOTD has made progress in its evaluation process and is well on its way to program implementation. Louisiana's management system reflects an understanding of the importance of multidisciplinary teamwork and communication to a service organization. LADOTD understands that quality is a neverending process and, consequently, has completed quality assurance audits of its 5 districts each year for the last 5 years. These audits have helped Louisiana to carefully evaluate processes across the districts, resulting in 30-50 process improvements. Newly acquired production tools will pave the way for an automation phase using a new computer system and database. Louisiana evaluates service performance indicators on a quarterly basis using appropriate statistical methods, and shares this information throughout the entire agency. The agency's philosophy guides its project-driven approach of "One team united towards its Mission."

Oregon

Oregon's management system is completely implemented. Like Louisiana, Pennsylvania, and Florida, Oregon has adapted a multidisciplinary project management approach and a project-driven system. Oregon has achieved a truly motivational and enthusiastic work environment, with excellent production and communication tools and a management that understands its employees' needs. The management team has put systems in place based on appropriate process evaluation and needs assessment methods.

ODOT has an excellent training program. The agency has designed many courses, but one course in particular has really made a quality impact. This 1-week course called the Project Leader Academy involves cross-functional and multidisciplinary training for project leaders. The

management team has successfully helped employees make the journey into quality project management and the project-driven atmosphere has broken down the communication barriers between the design division, the ROW division, and the construction division. ROW now serves as a technical branch for the design and construction divisions.

ODOT is on its second database. Called RAIN, this database is widely accepted by all. The agency uses both internal and external surveys as performance measures and is focused on client as well as employee satisfaction. Quality circle teams such as the relocation group and the newly formed appraisal group are in place. ODOT is well into strategic planning through its goal-setting activities, determining methods of reaching goals, scheduling necessary resources, establishing performance measures, reviewing performance against goals, and providing employee enrichment opportunities.

Pennsylvania

PennDOT might be classified as being in the strategic planning stage. PennDOT began its quality journey by adapting the Edosomwan-Baldrige-based assessment tool® in 1995 and has made tremendous progress since then with system development milestones. First PennDOT developed an excellent training program, a training database, an award-winning ECMS, as well as excellent program manuals. It has also developed many good production tools, such as newsletters, organizational climate surveys, process maps, and award-winning quality workgroups. PennDOT is embracing the needs assessment approach and conducting gap closure activities.

Wisconsin

WisDOT has excellent systems in place and is now evaluating how to appropriately measure its system performance. The agency just completed a process yielding a system of 10 performance indicators to drive process improvement. Now, as with any new measurement, comes the pilot study test to determine success. Additionally, Wisconsin has implemented a database called READS, being used statewide. Like Louisiana, Pennsylvania, and Florida, Wisconsin has incorporated a QAR process. While it has completed several reviews, it is still in the pilot phase of quality auditing.

Benefits Realized from their Quality Management Systems

In summarizing each State's key elements and practices with regard to their management systems, certain benefits and costs have been realized. Pennsylvania's projected long-term cost savings using a quality management system was approximately \$255 million. The benefits realized from incorporating a quality management system are a motivational work environment for employees, a quality project delivered on time and within budget, and highly satisfied clients

Lessons Learned During the Quality Management Journey

Quality management is a continuous process that requires commitment from everyone involved. Implementation of a management system will bring some skepticism and resistance. It is optimistic to believe that all employees will embrace the change that comes with incorporating a quality management process, but there are ways to make the transition smoother.

It is wise to anticipate mixed emotions. For example, some employees will think that their new database is unuseable because it was not developed by them or with their needs in mind. Some employees may complain that management is establishing performance measures to waste time, or that management is still signing off on appraisal waivers because it has to keep control and does not trust anyone else. Some agencies might be fearful of sending out client survey forms, thinking that "what you don't know can't hurt you." Some employees will insist that quality audits are conducted to cause them personal grief or because someone thinks they generally do a poor job.

It is only natural to have a few slips, trips, and falls while traveling down the quality management path, particularly with a process that is always evolving.

Ideas Are Unlimited

As part of the evaluation process, QEPI personnel asked this question, "If you had a wish list that was not limited by a rule, regulation, law, or act, what would you change to make your job easier or to improve your processes?" This question sought to get the best minds of ROW to share their ideas and aspirations, to elicit information about the problems that they were experiencing and about how they would mitigate those problems if the sky were the limit. All of the "wishes" from each State were then summarized in a table and used to identify common issues across all five States, (See table 1 on page XX).

The wish list varied according to who responded. Wishes of employees and supervisors differed from those of the ROW director. Surprisingly, no common wish list items went across all five states, although five wish list items were mentioned by four States as follows:

1. Tailored training on processes and laws and cross-training for ROW Staff;
2. More inclusive and fairer recruitment and career path practices;
3. Updated computer resources;
4. Legislative relief on process, fees, and/or cost; and
5. State-specific issues addressing access management practices, outdoor advertising, environmental issues, and amount of appraisal waiver (nominal) limit.

Other items that 3 of 5 states believed were important for their wish lists included increasing participation across group and department boundaries, conducting process reviews of ROW, revising training manuals or drafting new ones and allowing additional project lead time for ROW.

Communication

This section will share the knowledge and lessons from these agencies' experiences relative to communication issues. Wisconsin is focused on increasing participation across group and department boundaries. The traditional avenues of voice mail, e-mail, electronic memo, or facsimile could be complemented with cross-functional work groups as in Oregon, Florida, Louisiana, or Pennsylvania. Involvement in multi-disciplinary work groups provides opportunities for direct and candid communication with internal clients. Florida, Oregon, Louisiana, and Pennsylvania are good models for sharing access to ROW database systems with all of DOT, therefore giving other service areas a greater understanding of ROW job responsibilities. Multidisciplinary training can improve communication. Piloting a multi-disciplinary project leader's course similar to Oregon's or submitting internal client survey forms to the other discipline areas within the agency can elicit good feedback. The pilot study on the project management approach to multidisciplinary teaming in Wisconsin's District 4 could be evaluated for possible incorporation into other districts within Wisconsin.

Employee Recruitment

Another wish listed by four of the five states is for fair recruitment and career path practices. This is a potentially sensitive issue. With the Federal and State laws addressing equal rights and non-discriminatory hiring practices, States may want to revise their personnel descriptions.

Some employees felt professional engineers were promoted up the career ladder before any other position, a practice based on position and not skills, that top management within DOT should evaluate. This perception, whether fact or fiction, may lead to employee morale problems, which lead to quality management problems.

State-Specific and Legislative Issues Among the States

All employees need the proper tools to perform a quality service. These may include updated computers, updated programs, sufficient computer training, and access to computer support staff. Every state except Louisiana discussed State-specific process issues. Oregon felt it was important to address complaints about access management raised by a group called Businesses in the Legislature. Florida addressed these access issues by forming an access management review committee composed of high-level managers who meet to mitigate access problems. These committee members have the authority to make immediate decisions. Florida has a well-defined access management

law that mandates the decision-making process. Businesses were complaining that ROW did not involve them in the overall highway development process, crippling their business during construction. FDOT is improving signage and access that provides the route to businesses during construction. The Florida legislature passed a bill to allow the DOT to provide loan guaranties to businesses impacted by a project.

Florida would also like to evaluate a more effective way to communicate with businesses to counter the perception that highway construction drives out some businesses. Whether or not this perception is real, these businesses might claim damages as a result of the construction phase. Wisconsin addressed this concern by creating a special information packet designed specifically for businesses to help them thrive during the construction. It includes a workbook, case studies of how other businesses handled this issue, and sample news articles and press releases. The packet also includes an informational videotape titled, "In This Together."

Louisiana included on its wish list that all Federal reimbursement of State expenditures be based on State law. The Federal Uniform Act does not treat businesses the same as it treats residential properties, nor does it compensate them. Residential property owners have the right to be placed into like housing based on the general market value, whereas business owners are not compensated with like businesses. This is an issue that the Louisiana community is working on changing.

**A TOOL KIT FOR YOUR QUALITY
IMPROVEMENT SYSTEM**

A TOOL KIT FOR YOUR QUALITY IMPROVEMENT SYSTEM

The tools outlined in this section are designed to enhance a team's knowledge and skill in quality process improvement and problem solving to improve performance and increase customer satisfaction. The tools presented in this section are designed to assist the implementation and development of a successful quality management program. This tool kit does not imply one size fits all because management programs are unique and will reflect the each agency's different needs. However, each organization should be able to adapt these tools to suit their needs. The tool kit contains the following six components:

1. Commitment;
2. Evaluation of Processes;
3. Communication;
4. Training;
5. Continuous Improvement Measurement; and
6. Actions on Results of Measurement.

Commitment

The building of a quality management program must begin with management commitment and acceptance of the program. Everyone at an agency has an active role in quality and quality improvement. Commitment is the most important ingredient. This commitment must extend to everyone involved in the process, but especially senior management. Management should produce a policy statement declaring its agreement with the objectives, and commitment to the principles of the quality management program. Without such a commitment, the processes and procedures that are put into place have little chance to succeed. Workers who do not see management commitment are unlikely to embrace the program themselves. With the policy statement in place and the necessary commitment and willingness apparent, a successful management system journey may begin.

Evaluating the Processes

A crucial aspect of the quality improvement process is understanding how and why a function or series of functions is performed and how these relate to the entire process. Only when a process makes sense, can it be improved. A quality steering committee (QSC) comprised of senior management should lead this effort. The QSC should not perform the actual evaluation but should assist the formation of teams and provide the teams with support for their continuous improvement efforts. The goal is to produce clearly identified work processes and evaluate each. Because a process has been done a certain way for 50 years does not make it right. Who better to administer this effort than the expert technical staff performing the work? These teams should consist of technical staff from each discipline within ROW. For example, team members could represent appraisal and acquisition, relocation, property management, utilities, and local public agencies, or perhaps form a subgroup representing each discipline. It is extremely important for the team to represent the division or discipline. It should not consist only of senior staff members but should reflect diversity of background and experience. A State with a centralized/

decentralized model, such as Louisiana, may set up a team of individuals with anywhere from 2 to 30 years of experience in the program. A State with a decentralized model may want to include members from the central office as well as from each of the districts. A good rule of thumb is to make the team reflect the ROW Division. It should hold regular meetings, scheduled at the team's discretion. These can be held weekly, biweekly, monthly, quarterly, biannually, or annually. Meeting schedules should reflect the needs and structure of the division. A decentralized model may make it more difficult to meet monthly, in which case a quarterly meeting might make more sense.

Team activities work best when each member of the team understands both the performance improvement process and the role each team member performs. Each team should have a leader who plays a crucial role in managing and completing the quality improvement process. Typical leaders may be required to:

- (1) Lead the team in selecting the appropriate process improvement or problem-solving model;
- (2) Manage meetings and ensure that appropriate minutes are taken and properly distributed;
- (3) Cultivate teamwork;
- (4) Train team members on applicable process improvement models and tools; and
- (5) Plan work.

If the ROW Division operates from a multidisciplinary, project-driven, project management approach a user group made up of construction, design, and other specialty technical groups (e.g., environmental, geotechnical, etc.) may be appropriate. Pennsylvania, Florida, Oregon, and Louisiana are excellent examples for this multidisciplinary project management model. Once the processes have been evaluated and understood, they should still be deemed as necessary and as adding value to the project. Ask the question, "What are the objectives of the process and does the process still meet those objectives?" If these processes do not add value, consider the alternatives of further evaluation, improvement, or elimination. A pilot test of modified processes can be considered for implementation by the division. Results of the pilot test will assist the development of process improvement and help decide whether to keep or eliminate the process.

Communication

Stephen Covey, a business management consultant, in his book, emphasized the need for effective listening skills. Communication is a cornerstone of any work process, especially in the quality improvement arena. A division can produce a nearly perfect quality model, but lacking an effective communication mechanism, the model is doomed to failure. A lack of communication will prevent program improvements from achieving the desired results. When relocation specialists implement a process improvement that they believe has really made a positive impact, then they should share these results with the rest of the division. If on the other hand, a change implemented by relocation is causing problems in construction, the rest of the agency should know how and why this task was performed. Sharing information is vital to the agency's success.

Some available communication tools include e-mail, Internet, fax modems, phones, etc. States use various methods to communicate employee training needs. Florida and Oregon use internal survey forms to evaluate processes such as training. Wisconsin uses training survey forms. To communicate technical information from the quality team, Wisconsin sends the minutes from user group meetings to others in real estate. Oregon has a relocation group, which sends out "Andy-Grams" via the intranet. Written memos are an effective means of relating information. Properly planned staff meetings can also be a useful tool for conveying information. Employee suggestion boxes like those used in Pennsylvania are an effective tool. Databases, used in several of the states, can be useful if properly designed.

Both external and internal communication devices can be used. Internal communication involves sharing ideas, information, etc., with other sections within the agency. Louisiana holds biweekly meetings with other departments to discuss issues such as workload, project updates, and project needs. It has developed "the Statewide Gang," comprised of five individuals who help with the roller coaster run of unknown and varying workloads. They travel throughout the state and assist the districts when needed. This internal process allows Louisiana to allocate its resources where they are needed, thereby increasing efficiency and production. External communication, or multi-disciplinary communication, involves sharing ideas and information with all those involved in a project. Florida, Pennsylvania, Oregon, and Louisiana use this multidisciplinary approach to communicate. In Louisiana, the directors of all of the divisions involved in a project meet weekly to discuss project-related issues. Agenda items include schedules, problems, and project needs. Breaking down the barriers through communication brings about mutual understanding of other technical areas.

Means of Training

The ROW Division should train employees on the new procedures resulting from process evaluation and modifications. Training should include internal as well as external training programs. Internal programs can involve mentoring, on-the-job training, how-to manuals, training databases, and staff meetings where information is shared. Mentoring is one-on-one training whereby senior, experienced staff provide assistance and guidance to new, inexperienced personnel. Although it can take several forms, on-the-job training is basically teaching new staff as they perform the work, correcting their errors along the way and advising them on how to avoid similar mistakes in the future. Additional training could be obtained from staff meetings and user groups designed to share information and experiences. Florida, Pennsylvania, and Louisiana have completed thorough employee training manuals, invaluable tools in cross-functional role development. Louisiana measures for continuous, evolving improvements based upon completion of internal quality audits performed annually. Pennsylvania and Oregon use a training database to track completed employee training, to develop training materials, and to identify employee training needs. External programs can involve tuition reimbursement, pay incentives for degree completion, and agency-approved or-sponsored courses. Oregon has developed a cross-functional leadership course to provide employees with tools for developing better communication and leadership skills. Wisconsin develops formal training programs and provides informal training through user groups and statewide conferences.

Measuring Continuous Improvement

There are many ways to measure quality improvement. The challenge is to find the most efficient, user-friendly process. It is important, therefore, not only to understand the process but to be able to measure performance in a tangible fashion.

Performance indicators must be measured on a regular basis. Simply counting the number of calls or the number of letters written daily does not add value, because counting is not measurement. However, internal and external surveys can be valued performance indicators if a process is in place to evaluate the results. If results are not evaluated, then the task of collecting the data has no merit. It is not the survey itself that is the measure of improvement, it is the information collected and analyzed from the survey that allows one to measure improvement, and produce results. And it is the negative comments that provide the most insight into process shortcomings. Comments can and should lead to actions taken to modify, change, or improve a process. The attention paid to these comments need to be communicated with the customer. How to share information with the customer depends on the policy of each agency and the type of information being shared. For example, if a customer's complaint is about a procedure that is statutorily required, then an explanation may be the best approach. If the complaint goes to a process flaw, then an action to correct the flaw may be necessary. Customers should also be contacted by phone or mail to let them know the complaint was addressed and the process modified.

Actions Based on Measurement Results

Success of any management system ultimately depends on how one uses the results of performance measures, quality assurance audits, and other quality improvement processes in place. Quality must be a continuous process that offers no real closure---and is perpetuated beyond project completion.

PERFORMANCE INDICATORS FOR THE STATES

PERFORMANCE INDICATORS FOR THE STATES

Overview

People have come up with a number of different ways to attempt to measure whether quality processes are in place at an organization. The most widely accepted approach is to measure quality through data evaluation and interpretation. Data that relate which specific processes and to measure quality are referred to as performance indicators. Service performance indicators involve measuring the effectiveness, capability, and efficiency of the process.

Both internal and external quality measurement tools are available to assist a ROW division in evaluating quality improvements. Internal quality management tools can include internal customer survey forms forwarded by the ROW division to the design or construction divisions. These survey forms might ask questions of the design group that pertain to the construction advertising date and the effectiveness of interagency communications. Example questions may include:

- (1) Did ROW inform design personnel of the status of processes involving any difficulties?
- (2) Did ROW provide efficient and effective communication?
- (3) How could ROW serve the design division more effectively?

Once these internal customer survey forms are reviewed and evaluated, an improved process might be designed to meet the agency's overall goals. Other internal surveys could be established, such as Pennsylvania's organizational climate survey of ROW employees, employee suggestion boxes, agency e-mails, or input obtained from continuous improvement meetings. For internal performance indicators to be effective, employees must have an open forum to recommend process improvements. Other internal performance indicators are achieved through quality assurance audits and management reviews, as well as through direct measurements of performance indicators (e.g., time or cost).

One especially important external indicator is the external customer survey form. The customer survey will indicate how well employees are working and the effectiveness of the ROW division process overall. An example response would be, "Mr. Smith of the ROW division was very kind and considerate. However, I am upset that you have known about the road project for 10 years and you are only giving me 90 days to respond." In this case, it is obvious that the ROW employee is performing well, although the process may require modification. Sometimes a process cannot be changed without passing new rules or regulations. Maybe a letter to Mr. Smith earlier in the project would have helped, or perhaps regular project updates could have been provided to inform Mr. Smith of the upcoming project.

It is important to examine external customer survey forms for both positive and negative input, which should be shared with the ROW team. Negative input is the critical external performance indicator, because continuous improvement focuses on identifying problems to effect process improvements through a problem-solving approach. Process changes based on external customer input must be communicated throughout the agency, as well as to the customer.

Collecting appropriate data for use as performance indicators means understanding the processes in place and comparing data on them against appropriate measures. Output from performance indicators should go to establishing strategic goals. Again, performance indicators are not simply counting the number of phone calls, memorandums, or letters that each employee generates daily. Performance measures evaluate the results of phone calls, memos, or letters and lead to possible process improvement.

Performance Indicators– a Typical ROW Example

The Federal Highway Administration (FHWA) has delegated certain decisions to the State highway departments. As a result, States were given the option to implement a minimum value that a property must have to qualify for an appraisal. This process, called a waiver or nominal process, or administrative determination of value, allows the States to use abbreviated procedures where the estimated cost of a parcel is less than a specific monetary amount and does not present complex valuation issues. This amount is \$10,000 for 4 of the States, and \$2,500 for Wisconsin. States have used the waiver process to varying degrees, though it does seem to significantly reduce the time and expense needed to complete an appraisal. The appraisal is an integral step in the ROW division’s task of determining the price that a State will offer citizens for parcels the DOT needs to acquire.

This example illustrates the correlation between the use of the appraisal waiver process and expense attached to the appraisal of parcels. This correlation will vary due to the different requirements, laws, and policies under which each State operates.

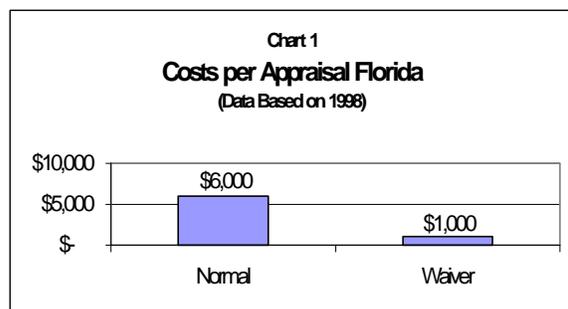
State Performance Evaluations

Each state appraises a certain number of parcels each year. Each state provided a breakdown of costs per task, or man hours per task, for both normal appraisals and appraisal waivers. Comparison is made between the total expenditures for the normal appraisal process and for the appraisal waiver. The findings demonstrate the huge impact made by the appraisal waiver process on the time and expense needed to complete the appraisal task.

The following charts, called histograms, show the cost of completing both processes—normal appraisals and appraisal waivers.

Florida Evaluation

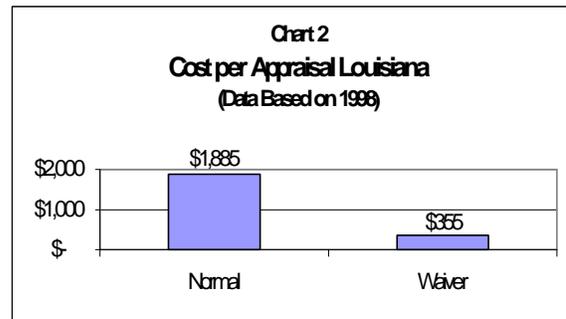
Chart 1 illustrates that by implementing the appraisal waiver procedure, costs are dramatically decreased. Florida handles approximately 3,000 parcels each year. Normal appraisals cost about \$6,000 per appraisal. If all 3,000 transactions were handled through the



normal process, transaction costs would be approximately \$18 million per year. Approximately three percent of all Florida ROW transactions are handled using the waiver process. The use of the waiver process decreases costs by \$5,000 per parcel valuation. If three percent (90 parcels) handled using the waiver process and the remaining 97 percent (2,910 parcels) are handled using the normal process, total expenditures will approach \$17.5 million per year—a difference of \$0.5 million per year in expenditures alone.

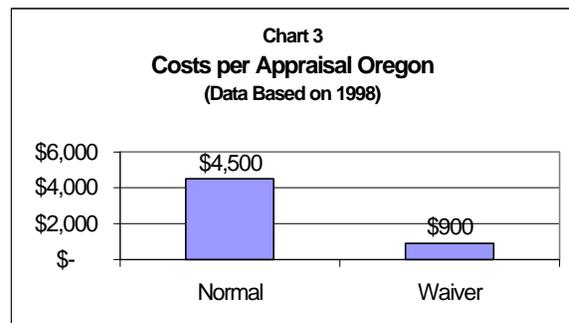
Louisiana Evaluation

Chart 2, illustrates that costs are dramatically decreased by implementing the appraisal waiver procedure. Louisiana handles approximately 2,000 parcels each year. Normal appraisals cost about \$1,885 each. If all 2,000 transactions were handled through the normal process, transaction costs would approach \$3.8 million per year. Approximately 33 percent of all Louisiana ROW transactions are handled using the appraisal waiver process. Chart 2 shows that use of the appraisal waiver process decreases expenditures to about \$355 per parcel, a cost savings of \$1,530 per parcel valuation. If 33 percent (666 parcels) are handled using the waiver process and the remaining 67 percent (1,334 parcels) are handled using the normal process, then total expenditures will approach \$2.75 million per year—a difference of \$1.02 million a year in expenditures alone. The implementation and use of the waiver appraisal process has saved the Louisiana DOT significant expense and manhours per project.



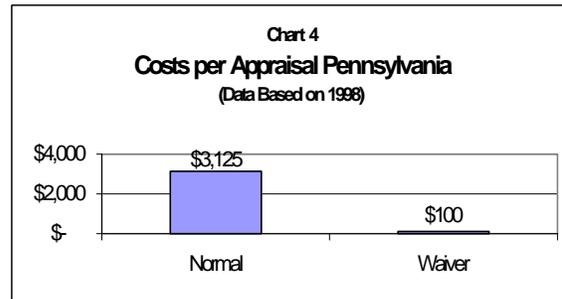
Oregon Evaluation

Chart 3, illustrates that by implementing the appraisal waiver procedure, costs are dramatically decreased. Oregon completes about 900 parcel valuations in a given year. Normal appraisals cost about \$4,500 each. Handling all 900 transactions through the normal process would put transaction costs at approximately \$4.1 million a year. Approximately 50 percent (450 parcels) of all Oregon ROW transactions are handled using the waiver process. As Chart 3 shows, use of the appraisal waiver process decreases expenditures to about \$900 per parcel and decreases costs by \$3,600 per parcel valuation. If 50 percent (450 parcels) were handled using the waiver process, then total appraisal expenditures would approach \$2.4 million per year—a difference of \$1.7 million a year in expenditures alone. The implementation and use of the waiver process has saved the Oregon DOT significant expense and manhours per project.



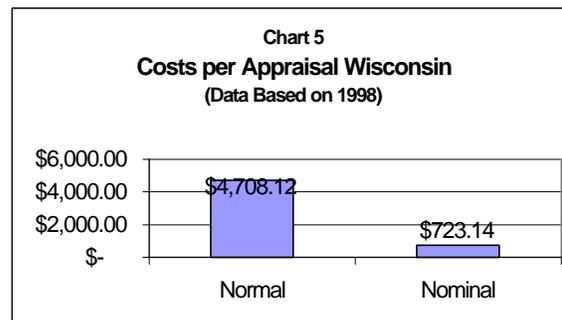
Pennsylvania Evaluation

Chart 4, illustrates that implementing the appraisal waiver dramatically decreases procedure costs and time. Pennsylvania handles about 3,000 parcel valuations in a given year. As seen in Chart 4, normal appraisals cost about \$3,125 each. If all 3,000 transactions were handled through the normal process transaction costs would approach \$9.4 million per year. Approximately 74 percent (2,220 parcels) of all Pennsylvania ROW transactions are handled using the waiver process. As Chart 4 illustrates, use of the appraisal waiver process decreases expenditures to about \$100 per parcel and decreases costs by \$3,025 per parcel valuation. If 74 percent (2,220 parcels) were handled using the waiver process, then total appraisal expenditures would approach \$2.7 million per year a difference of \$6.7 million per year in expenditures alone. The implementation and use of the waiver process has saved the Pennsylvania DOT significant expense and manhours per project.



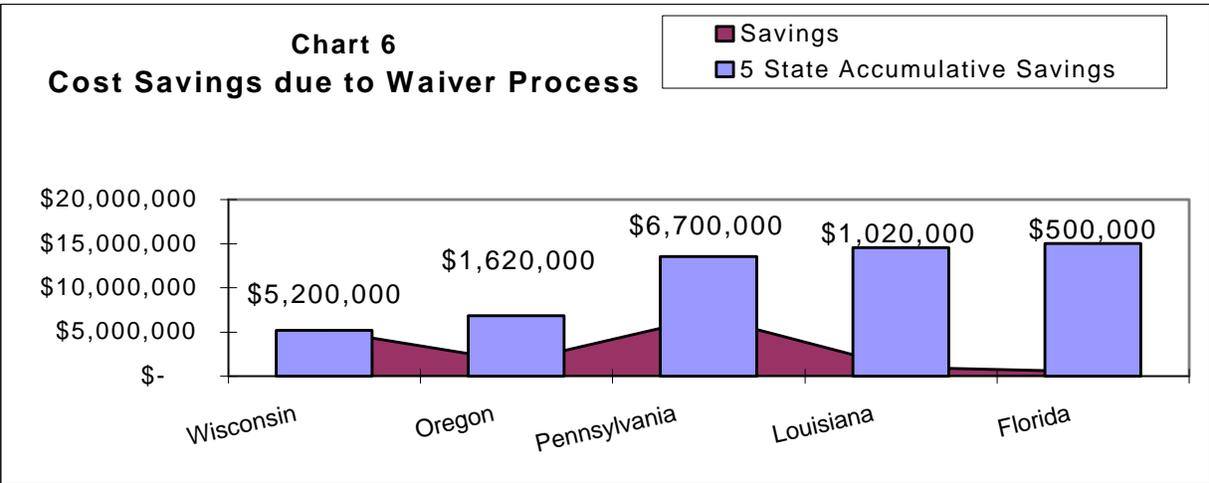
Wisconsin Evaluation

Chart 5, illustrates that implementing the appraisal waiver procedure dramatically decreases costs and time. Wisconsin handles about 2,000 parcel valuations in a given year. Chart 5 shows normal appraisals cost about \$4,708 each. If all 2,000 transactions were handled through the normal process, transaction costs would approach \$9.5 million a year. Approximately 60 percent (1,200 parcels) of all Wisconsin ROW transactions are handled using the waiver process. As Chart 5 illustrates, using the appraisal waiver process decreases expenditures to about \$723 per parcel and decreases costs by \$3,985 per parcel valuation. If 60 percent (1,200 parcels) were handled using the waiver process, then total appraisal expenditures would approach \$4.3 million per year—a difference of \$5.2 million a year in expenditures alone. The implementation and use of the waiver process has saved the Wisconsin DOT significant expense and manhours per project.



Conclusion

The significant time and money savings resulting from adoption of the appraisal waiver process were clear to most of those involved. As Chart 6 illustrates, the savings in most States were enormous. Florida did not realize the monetary savings from the appraisal waiver process to the



extent of the other four States due to state rules and policies, not the appraisal waiver process itself. Chart 6 depicts the cost savings by State as well as an accumulative total.

CONCLUSIONS

CONCLUSIONS

Opportunities for Improvement

No evaluation on quality management systems would be complete without noting the potential for additional improvements. The quality process demands a push toward continuous improvement of customer focus and operational procedures. Quality is a journey, not a destination.

There are four major opportunities for improvement in the quality planning process:

1. Additional strategic planning initiatives
2. Organizational goal setting
3. Evaluation of correct performance indicators
4. Development of additional internal and external performance measures for the organization.

In most of the organizations studied, strategic planning took place at levels higher in the DOT and included limited input from the various ROW divisions. In other words, the ROW's goals were in a large part set by others outside of the division. The opportunity exists for ROW divisions to implement their own strategic quality planning initiatives that include sub-goals, action items, resource deployment plans, and recognition systems specific to the needs of the division. In this way, the mission and goals of the division can be aligned with the mission and goals of the larger organization.

Along with the strategic planning initiative comes the opportunity for everyone to take part in the goal planning process. Goals set by the division should be measurable, and personnel within the organization should be held accountable for them.

In order to evaluate these goals, organizations need to deploy the correct performance indicators. Performance indicators should measure input to a process, not the output of it. ROW divisions should periodically reevaluate their performance indicators to make sure that they truly measure performance.

Finally, within the planning process, there is the opportunity for ROW organizations to develop additional internal and external measures of performance. In this way, divisions can collect a well-rounded cross section of data pertaining to customer evaluation of their operational excellence.

In addition to observations pertaining to planning, there are three opportunities for improvement in operational processes, including (1) the opportunity for continuous employee training and empowerment, (2) the opportunity for improved communication skills, and (3) the need for sharing processes and databases throughout the entire organization.

Additional education and employee empowerment lead to increased job satisfaction and personal performance, and put decision-making closer to the customer. There is the

opportunity in any technical arena to improve communication between technical personnel and the rest of the organization. Improved communication in a technical setting can help smooth workload requirements, prevent misunderstanding, and build common bonds between personnel.

Finally, there is an opportunity for STD organizations in general to develop processes and databases that are used across functional and geographic boundaries. Building an integrated transportation system is more than just the design of that system, the procurement of the parcels, or the construction of the highway. It is an integrated process that demands integrated processes and databases to become truly effective.

The Journey

There has been a major shift in the mindset of managers and employees in many ROW organizations on the quality improvement process. They realize that quality can be seen with job requirements, internal employee satisfaction, and external customer supports. ROW divisions have come to view quality as not "just another program" or additional cost to the organization, but as an investment in their future. This investment has led to significant, measurable improvements in the processes and services provided by the various States in this study, including the cost savings that result from doing the job better.

Good luck in implementing your quality improvement process and enjoy the journey!