

Transportation Asset Management Case Studies

Presented by



U.S. Department
of Transportation
**Federal Highway
Administration**

COMPREHENSIVE TRANSPORTATION ASSET MANAGEMENT

The North Carolina Experience, Part Two





Linn Cove Viaduct

FRONT COVER PHOTO:
Figure I-26 Interchange with NC 146 in Asheville

Note From the Director

Across the nation, transportation agencies are being challenged to find innovative ways to preserve, maintain and extend the service life of existing transportation assets. With the nation's infrastructure aging, demands to improve performance and sustain existing transportation assets have new focus and meaning.

North Carolina DOT has been using Transportation Asset Management (TAM) to effectively manage its transportation assets for almost a decade. The focus on data-driven management has made the migration to a performance-based asset management approach easier for the agency.

The TAM approach to use data to generate scenarios and make trade-off decisions has helped the agency sustain and extend the productive long-term service life of the State's transportation assets.

The data-driven approach helps the agency be transparent and accountable to the public. It enables the agency to link performance expectations of employees to the performance of the transportation assets, making it easier for the employees to be responsible and contribute effectively to sustain the long-term performance of the agency's transportation assets.

On behalf of the Office of Asset Management, Pavements and Construction, I am pleased to add Part 2, of the North Carolina Case study on Comprehensive Asset Management to the TAM series. I believe this study shows how mature TAM processes enable data-driven decisions that are critical to transparently addressing the many complex challenges being faced by transportation agencies. I believe the practices and innovations will serve as a blue print to other transportation agencies facing similar challenges.



J. B. "Butch" Wlaschin, P.E.
Director, Office of Asset Management,
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Note to the Reader

The TAM case study series is the result of partnering between State Departments of Transportation and the asset management team in the Federal Highway Administration (FHWA). The FHWA provides the forum, and the States furnish the details of their experiences with asset management.

This case study involved interviewing the leadership and staff at the state transportation agency, researching, reviewing and compiling information about the agency practices, systems and processes in use. The State transportation agency approves the case study report prior to publication. The case study report relies on the agency's perspective, experiences and self-assessment. The case studies are intended to help other transportation agencies understand and learn from the experiences of peer agencies. Readers should understand that geographical, organizational and political environments influence the implementation of practices across the nation and customization may be required for specific application. ■



New bridge at I-26 Interchange with NC 146 in Asheville

Executive Summary

North Carolina is among the leading states in the nation in the use and implementation of Transportation Asset Management (TAM) philosophies. These philosophies involve proactively maintaining, preserving and improving the performance and condition and thereby extending the productive life of transportation assets in order to effectively service the mobility and access needs of the state. These philosophies were an integral part of the Long Range State Transportation Plan (LRSTP) implemented by the state in 2004. In taking the LRSTP to the next step, the North Carolina Department of Transportation (NCDOT) has completed the development of a 30 year Comprehensive Transportation Plan, a 10-year Transportation Plan and a 5-year Work Program.

The NCDOT has reformed its transportation decision making process by bringing in a more professional management approach. This approach includes the use of performance measures based on levels-of-service; the development, implementation and enhancement of several management systems; the use of web-based systems and data that enable generation of trade-off scenarios to assist in the optimal use of limited funds; decentralized decision-making, which involves providing access to data through a central repository and empowerment to its employees; aligning employee goals to the goals of the agency; and a multi-pronged strategy to inform and obtain feedback from stakeholders.

The result of the strategic decision making framework adopted by the State is the Policy-to-Project initiative which outlines the projects that NCDOT will be delivering for the next decade (2011-2020) along with the associated funding levels. This initiative presents NCDOT's performance management plan showing the highest priority programs and policies, along with target measures for meeting them. Together, the Policy-to-Projects initiative and the performance management framework will help NCDOT deliver a transportation infrastructure that is safer, lasts longer and moves people and goods more efficiently. Transportation Asset Management philosophies,

the associated data driven approach and extensive public input are integral components to NCDOT's strategic prioritization of projects.

As part of its TAM approach, NCDOT is proactively focusing on maintenance and preservation to improve the performance and condition and to extend the life of transportation infrastructure assets. The agency expects waves of aging bridges and interstates reaching their "end-of-life" and has designated significant funds as part of its planning process to address the replacement and rehabilitation of such aging transportation infrastructure.

The NCDOT leadership is actively working to ensure that the right measures are selected and the right targets are set for gauging the performance and condition of infrastructure assets. By aligning all organizational activities and tying each employee's performance, measured through the Performance Appraisal Dashboard, directly to accomplishing the agency's goals, the DOT has been able to engage the workforce and its various business units to take ownership in delivering the desired outcomes. The linking has increased collaboration within and across business units as well as with other resource agencies and business partners. This approach has



I-40 Cloverleaf Interchange with US 1 in Raleigh

also resulted in a culture of innovation, expedited decision making and created a larger pool of more knowledgeable workers.

Key lessons from the North Carolina experience show that leadership engagement is critical to the success of Transportation Asset Management. It is important to have the right measures, establish the right targets and incrementally try to achieve the desired strategic outcomes. By improving internal and external communications, providing access to data, tools and technologies, imparting training, empowering employees to make decisions and aligning employee goals to organizational goals, an agency can achieve significant success in sustaining the performance and condition of its transportation assets into the future.

NCDOT continues its effort on using TAM philosophies, learning from its challenges and building on its significant successes in providing proactive and sustainable service towards developing, maintaining and modernizing its transportation infrastructure to effectively meet the mobility and access needs of its stakeholders. ■

AGENCY FACTS

The North Carolina Department of Transportation is responsible for all modes of transportation in North Carolina including highways, rail, aviation, ferries, public transit and the transportation infrastructure for bicycles and pedestrians. The NCDOT's operations are led by the Secretary of Transportation, a member of the Governor's cabinet and a Chief Operating Officer (COO) who is responsible for day-to-day management and oversight of agency activities. The COO chairs the Strategic Management Committee that is comprised of executive staff responsible for developing the agency's strategic direction and directing the performance improvements in the agency. Additionally, a 19-member governing body (Board of Transportation) is responsible for overseeing the policy making process and monitoring the performance of the agency.

As of 2011, NCDOT maintains over 79,000 miles of highways, the nation's second largest State-maintained system. This includes 15,000 miles of primary highways and 65,000 miles of secondary roads. The agency also maintains over 18,000 structures. North Carolina has over 72 publicly owned and nearly 300 privately owned airports, heliports and other landing areas. Public transportation systems operate in all 100 North Carolina counties. The railroads in North Carolina operate 3,700 miles of track, and there are six Amtrak trains providing services to 12 North Carolina cities. The State also has one of the largest Adopt-A-Highway Programs in the country covering 12,000 miles of state-maintained roadside adopted by over 6,000 volunteer groups and saving taxpayers approximately \$5 Million in annual clean-up costs. The agency operates the nation's second largest ferry system with 21 ferries that serve seven routes.

NCDOT's highway program, headquartered in Raleigh, is delivered by approximately 11,000 employees through the Division of Highways (DoH), the Division of Technical Services (DTS) and the Governor's Highway Safety Program (GHSP). The DoH is comprised of 14 divisional offices, 40 district offices and 80 county maintenance facilities spread across the state. DoH and DTS collectively are responsible for all administration, operations, contracts, construction and maintenance activities supporting the delivery of transportation projects and services statewide. The GHSP is responsible for statewide safety and promotes highway safety initiatives and programs. NCDOT works closely with 17 metropolitan and 20 regional planning organizations that play a key role in the state's transportation planning efforts.

NCDOT was one of the first DOTs in the nation to use social media to connect with the public. The DOT uses Facebook, YouTube, Flickr, Twitter and

the agency's website to communicate and stay connected with the public and its business partners. To provide mobility and access, the agency uses 600 live traffic cameras and 200 speed sensors managed through three transportation management centers that provide a real-time look at traffic along major routes in the state. North Carolina's 511 real-time statewide Travel Information System receives over a million calls each year. The agency's Incident Management Assistance Patrol makes over 60,000 stops each year to assist disabled motorists and keep traffic moving in congested areas.

NCDOT's mission is *"Connecting people and places in North Carolina—Safely and efficiently, with accountability and environmental sensitivity."*

The agency's goals are:

- Making our transportation network safer;
- Making our transportation network move people and goods more efficiently;
- Making our infrastructure last longer;
- Making our organization a place that works well, and;
- Making our organization a great place to work.



I-40 approaching Wade Avenue in Cary

The History

The NCDOT was established in 1915 as the State Highway Commission, and took over county road system maintenance in 1932. The Executive Organization Act of 1971 formed the North Carolina Department of Transportation and Highway Safety by combining the services provided by the State Highway Commission and the Department of Motor Vehicles. The name was revised to North Carolina Department of Transportation in 1979 when a new Department of Crime Control and Public Safety took over the services provided by the Highway Patrol Division. The North Carolina Department of Transportation now includes the Division of Motor Vehicles, the Turnpike Authority and the Governor's Highway Safety Program.

SETTING THE STAGE

What Did North Carolina Have?

After an era of new construction and expansion linked to population increases in the state, the NCDOT moved to preserving and maintaining the transportation assets under its charge. In the early 2000's the agency focused on developing and implementing the principles and strategies of Transportation Asset Management. To support and coordinate asset management activities across the agency, an Office of TAM reporting to the Chief Engineer for Operations was created in 2003.

To effectively manage available funds and address the needs of citizens, the agency categorized the network and prioritized investment strategies to maximize mobility and connectivity for a core set of highway corridors. The approach resulted in three tiers of the North Carolina Investment Network, which include, 1) the statewide tier that included the interstates and major primary highways that have the highest usage, connect major population centers and help mobility on long-distance trips, 2) a regional tier, that included minor US and NC designated highways, connected regional centers and serve the large



Newly constructed Interchange with I-26 and NC 146 in Asheville

demand for short-distance commuter travel, and 3) a sub-regional tier of minor NC routes and secondary roads serving localized short distance movement between homes and businesses.

This tiered approach to managing the network helped the agency get buy-in and support from the legislature and the public to shift resources from low-volume roads and invest proportionally more resources to higher-volume and more economically important transportation segments.

In North Carolina, Asset Management became a central principle that helped the strategic re-focusing of organizational efforts and financial priorities. The “*take care of existing assets*” philosophy of asset management implemented by the agency also got legislative support resulting in improved flexibility in funding and an additional line item for system preservation in the legislative budget. The focus on preservation also led to changes in secondary road legislation. A highway trust fund created in 1989 for the sole purpose of *paving* secondary roads was revised to also allow for the *improvement* of paved secondary roads. The agency also implemented a process to update its Long Range State Transportation Plan (LRSTP) every two years to reflect changes to needs as well as revenues. The agency surveys citizens and uses the feedback to fully update the LRSTP every four years.

In 1999, NCDOT implemented performance management for maintenance activities. In 2007, a more detailed plan was implemented to rollout performance measures for bridges, pavements and other agency assets as well as for measuring the performance of the agency’s operations and management functions. With a steering committee responsible for providing oversight, the agency developed performance measures based on level-of-service aligned with the agency’s TAM plans. These measures support the agency’s LRSTP. To facilitate data-driven decisions, the agency also developed and implemented management systems for pavements, bridges, maintenance and geographical information.

What Did North Carolina Want?

NCDOT wanted to have a comprehensive asset management approach that addressed the performance of its physical assets as well as the services it provided. The agency wanted to make sure it was developing and maintaining the transportation infrastructure in good condition to meet the mobility and access needs of its citizens in an efficient and collaborative way. NCDOT wanted to be accountable and strategic in doing business, incorporating citizen feedback in agency decisions.

With one of the largest inventory of aging bridges in the nation, the agency wanted to make sure it was proactive and strategic in developing long term

plans. These plans were to improve and preserve the condition and performance of existing infrastructure to meet the state's growing transportation needs, despite continuing financial constraints. The agency also wanted to take politics out of decision-making by developing a data-driven, implementable, ten-year plan for project delivery. The agency plans to build on the ten-year plan to continue to meet the future needs of its citizens. To support this, the agency set in motion a new vision for transportation reform in 2009 which included:

- using measurable criteria such as safety, congestion and system condition in the prioritization and selection of projects;
- actively, engaging and seeking input from transportation partners and - technical experts in delivering strategic decisions; -
- including the priorities of local and regional partners in the project - selection process; -
- incorporating extensive public outreach to both inform and get - public input; -
- using design-build-financing, an innovative financing strategy in delivering projects, and;
- having a cohesive and integrated organization involved in decision-making, taking ownership and collaborating across silos to deliver the targeted results.



I-40 design-build widening project in Wake County

HOW DID NORTH CAROLINA GET THERE?

With a foundation of a performance based asset management system and a three-tiered, need-based transportation network, the agency moved the focus to developing solutions to ensure accountability and long-term sustainable performance and condition of its transportation assets. In addition to effective management of physical assets, the agency developed comprehensive strategies to address mobility and access needs of the stakeholders and the public. The agency led a multipronged initiative, communicating with and obtaining feedback about short-term and long-term transportation needs and expectations from stakeholders and the public. Using the feedback to revise and refine its mission, the agency worked closely to get buy-in from resource agencies, local and regional partners, and the legislature.

The agency then focused on aligning all internal efforts and energies on the mission of *“Connecting people and places in North Carolina—safely and efficiently, with accountability and environmental sensitivity”*. With all arrows aligned, the agency’s business units developed and implemented strategies to deliver its mission. As business units took ownership and became champions of the mission, the implementation of the strategic objectives became a bit easier.



Department leadership discussing asset management principles at NCDOT maintenance conference

Small successes rippled through the business units triggering other implementations and successes. In parallel, the agency worked with intergovernmental groups, cities, localities, regional agencies and citizen groups to inform and get them to understand the challenges and issues of maintaining, preserving and sustaining the state's large and aging transportation infrastructure under funding constraints.

Developing realistic long-term strategies to address the challenges and transportation needs of the state meant putting every hand and mind to work effectively and collaboratively. This required providing agency-wide easy access to reliable and accurate data. *"Expediting and streamlining meetings within the agency, with resource agencies and other external partners became a necessity"*, said Terry Gibson, NCDOT State Highway Administrator. *"Making the best use and investment of available funds within and across asset classes and meeting major milestones on-time, on-budget and within scope became a high priority,"* said Victor Barbour, Administrator of the Technical Services Division.

It became extremely important to be innovative in using available funds to manage and preserve the existing assets. Centralized decision-making was proving expensive, inefficient and delaying progress, so employees had to be trained, supported and empowered to make decisions appropriate to their job functions. This meant providing the tools and technologies to expedite decision-making, moving to data-driven decisions and holding people accountable for decisions and outcomes.

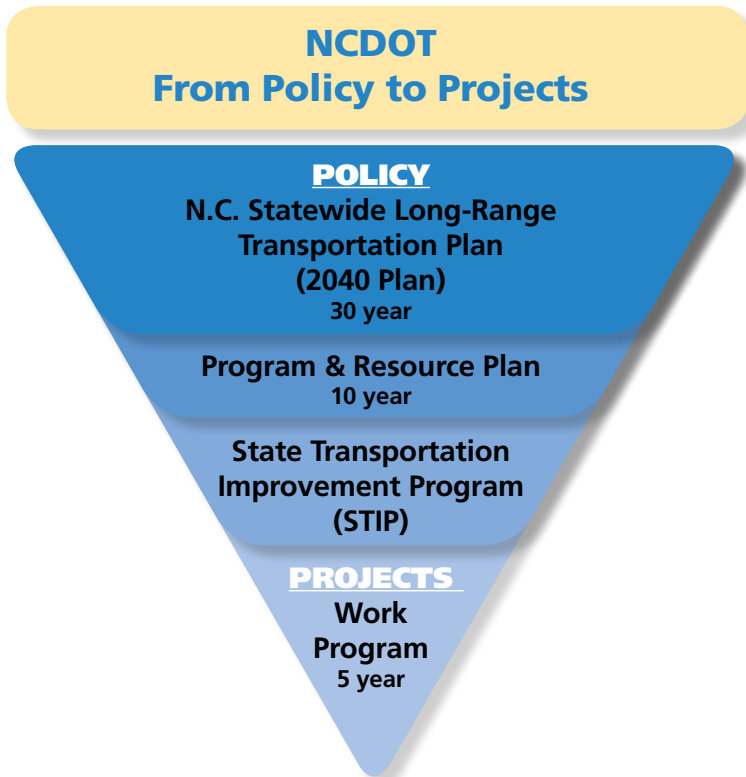
WHERE IS NORTH CAROLINA TODAY?

The realignment and coordination of all internal efforts to sustain infrastructure condition and performance to support short-term and long-term mobility has provided a new focus for the agency. This has led to a more holistic approach that includes collaborating and working closely across business units and with intergovernmental groups, resource agencies, local, regional and other external partners to cost effectively deliver the strategic objectives that support the agency's mission.

In 2009, the agency reached out to a wide range of stakeholders and industry experts for input and developed a new transportation reform model that resulted in a more effective, efficient and accountable, decision-making process for all transportation projects. Based on this model, the North Carolina Board of Transportation sets policies supporting the department's mission and the agency translates these policies into programs, projects and work plans.

Following TAM principles, the agency used data to forecast revenue and spending and using measurable criteria developed a thirty year Comprehensive Transportation Plan. This resulted in a more detailed and prioritized 10-year Transportation Program and Resource Plan with funds assigned to NCDOT's programs. This 10-year plan is used to develop a fully funded shorter-term five-year Work Program. The Work Program translates the *policy into projects*, detailing individual projects, programs and services that will be delivered along with schedules for performance and delivery of targets. This policy-to-projects model that adheres to TAM principles is criteria-based and data-driven with a stable list of fully funded projects and services.

NCDOT has an external performance dashboard which is a measure of the agency's performance in addressing its strategic objectives and the access and mobility needs of the public. The agency uses a multi-pronged communication



and information dissemination strategy. This strategy involves using various social media outlets such as Facebook and Twitter as well as more traditional methods that include emails and newsletters. In addition a performance dashboard keeps citizens and agency partners informed about the progress and performance of the projects in the Work Program.

NCDOT has also updated its Bridge Management, Pavement Management and Maintenance Management Systems. With system enhancements and a well-planned data collection effort the agency is able to generate trade-off scenarios both within and across asset classes to assist it in decision-making. Engineering judgment is then applied to the trade-off scenarios to identify the best investment strategies and wisely use available funds to preserve, maintain and extend the productive life of existing infrastructure.

In 2008, NCDOT revised its performance targets to more realistically reflect the existing roadway conditions. The agency has also implemented an internal Performance Dashboard Appraisal (PDA) to measure employee performance towards meeting agency goals. Through the PDA, the performance of the agency



I-40 and I-240 interchange in Asheville—pavement, bridges, and roadside features

is directly tied to the performance of every employee. This linking shows how the activities and accomplishments of each employee can result in the successful achievement of the agency's goals. It has provided clarity on how each employee can contribute to the success of the agency's mission. This employee stake in NCDOT's performance has also increased the collaboration between the different organizational tiers within and across business units resulting in many improvements in business processes and a larger pool of knowledgeable employees actively engaged in making and implementing decisions.

The implementation of the PDA and the agency's move from a *prescriptive to an outcome based business model* has resulted in more innovations in business units. Technologies are being tapped to address business challenges resulting in many process efficiencies. To encourage innovation and engage business units in decision-making, the agency has restructured the Technical Services Division to facilitate innovations and take on the mundane activities that can bog down the innovators and implementers.

One of the innovations resulted in a change in focus from "completion of tasks" to "successful and timely completion of projects and services". This change is being institutionalized by implementing an enterprise project management software called "STaRS" that monitors on-time, on-budget and timely completion of milestones on all the projects in the ten-year Work Plan. As part of that implementation a lighter version called "Baby STaRS" is being deployed for tracking major project milestones from planning through project completion for smaller projects such as intersection improvements. This will also allow the agency to optimally invest every available dollar today by identifying unused committed funds at the state and local level and investing them in delivering projects today instead of locking them up for future projects.

Data-driven asset-management strategies in NCDOT have resulted in a culture of innovation, continuous improvement and expedited decision-making. One such innovation resulted in the pilot testing of an Electronic Content Management (ECM) System. The full scale implementation of ECM will reduce the lead time currently necessary to collect, compile and print material in preparation for project meetings. It will allow agency teams to meet anywhere at any time with internal and external partners and access data, plans, designs and all other project information via the web from any location. This will improve collaborative decision-making and expedite project planning, review and delivery of projects while saving millions in resource utilization and expedited project delivery.

Other innovation tools include using design-build and design-build-financing projects to save costs and expedite delivery. The agency has successfully awarded fifty two design-build contracts of which two included financing.

The leadership, realizing that all tiers of the organization are involved in making some type of decisions, has pushed to consolidate enterprise data into a central repository managed by business owners and accessible agency-wide in a user-friendly format. By establishing employee performance appraisals, detailing expectations, providing training and easy access to data, the agency has been able to motivate employees to use data to drive decisions appropriate to their job functions. This is also creating a more knowledgeable workforce while institutionalizing data-driven decision-making across the agency.

Breaking down silos and integrating around the job to be done has meant periodic evaluation, revising and combining of jobs, retraining of employees to prepare them for new jobs and in some cases, phasing out select jobs.

NCDOT has the *second largest* inventory of aging bridges in the nation. These bridges are expected, over the next few decades, to reach their end-of-life in large waves. To address this, the agency has set aside monies and has a program completely focused on addressing aging bridges. Management



Aerial view of the new I-85 bridges under construction, existing I-85 bridge, railroad bridge, newly rehabilitated Wil-Cox Bridge and old highway bridge over the Yadkin River

strategies, technologies, tools, education and training programs have been implemented to increase productivity, improve and manage resource utilization and proactively flatten the peaks and valleys of bridges that need to be addressed.

Having implemented performance measures to support its asset management strategies, NCDOT moved to ensure that performance measures incorporated engineering factors and citizen's needs related to the agency's mission of providing mobility and access. An agency performance subcommittee of senior members meets every month to review, update and validate the performance measures and targets for relevance and applicability to the agency's mission and goals. This validation includes making sure that the:

- selected measures are good indicators of the performance and condition of the transportation infrastructure and the services provided by the agency;
- right number of measures is being used;
- target for each measure is right, achievable and increases incrementally - over time; -
- agency is effectively utilizing resources to collect only the necessary data about system performance and the performance measures were being shared with the public;



I-40 in Raleigh

- process of computing the performance measures is transparent and data driven, and;
- measures are renewed, revised and kept pertinent to the agency's mission and strategic objectives.

To further refine and improve its maintenance performance targets, NCDOT contracted through North Carolina State University to perform roadway reviews of selected routes throughout the state. These reviews involved riding stakeholders, as well as citizens on 40-50 mile tracks asking them to respond to a series of survey questions based on their perception of the roadway performance and condition. In all, over 300 people participated in the reviews. The feedback from this will be used to review the existing performance targets to determine appropriateness.

WHAT HAS NORTH CAROLINA LEARNED?

Terry Gibson, the NCDOT State Highway Administrator states, *“Asset management is the best way to proactively manage to sustain the performance and condition of transportation assets. It looks at data on condition, performance and funds available to determine the best strategies to implement, in order to ensure the long-term sustainable condition and performance of the transportation infrastructure”*. Terry says, *“Trade-off analysis tools, electronic content management, consistent view of data, appropriate data collection, and enterprise-wide access to data coupled with the ability to analyze and forecast the effects and outcomes of actions, have tremendously improved the agency's ability to make strategic decisions.”* Terry identified the following in helping the agency further asset management in North Carolina:

- Asset management is a journey and it is important to start the journey sooner rather than later.
- Active engagement of leadership is essential to institutionalize and ensure the success of TAM in an agency.
- Measuring the right things and establishing the right targets, is important to asset management. Periodically correlating customer expectations and engineering judgment in establishing performance measures and setting performance targets is important to ensuring that the technical aspects of managing the long-term performance of the asset is met while engaging the stakeholders and addressing customer expectations.
- Once the business units buy-in to the mission and have a clear understanding

of the expected outcomes, achieving the mission and the long-term strategic goals of the agency becomes easier.

- Make innovating easy and inclusive. Institutionalize the creation and implementation of innovations and improvements across the agency so that innovations are not restricted or limited to a select few. This will ensure that the process of innovating continues and innovation does not stop when the current innovators leave the organization.
- The Performance Dashboard Appraisal forced conversations between managers and employees and, though it took time and some refinements had to be made to the PDA, it resulted in the agency-wide buy-in of the agency's mission and strategic goals.
- Though initially there is fear and resistance to linking employee performance directly to the agency's mission and strategic goals, with persistence it will result in more informed employees who will continuously seek to improve all areas of the agency's business.
- Provide the necessary tools, technologies, and training to empower employees to make decisions without fear of failure. Use of data and trade-off analysis in decisions validates responsible decision-making and improves the agency's credibility with the stakeholders.
- Indecision is expensive and institutionalizing knowledge management and decision-making is important to sustain long-term performance of the business.
- Aspirational high goals are often difficult to achieve and can dishearten and negatively impact morale of employees. Success leads to more success, so it is important to have incremental achievable goals trending in the right direction that cumulatively and, over time, result in achieving the strategic goals of the agency.
- Perfection can be very expensive and time-consuming, so discriminate on what needs to be perfect and focus on incremental improvements in other areas.
- Focus on continuously communicating internally and externally using multiple strategies, tools and technologies to engage, inform, obtain feedback and address concerns that are roadblocks to progress.
- Cut out intermediaries and make data available to everyone from a single source repository. This will expedite and ensure consistency in data that is used as input to decision-making, while expediting work, ensuring transparency and improving the agency's credibility.

WHAT'S NEXT?

Looking to the Future

“NCDOT has made great progress in implementing the new vision for a reformed NCDOT. We will continue to learn from our challenges and build on our successes,” says COO, Jim Trogden. Looking to the future, the agency will be continuing on the following initiatives:

Proactive and Sustainable Service, Maintenance and Modernization of Infrastructure—The agency will continue to apply TAM principles and be proactive in using technology and innovative strategies of project delivery and financing to modernize, maintain, preserve and extend the performance and productive life of existing infrastructure assets and efficiently deliver quality transportation services.

Statewide Coordination—The agency will continue to promote Governor Bev Perdue’s sustainability efforts aimed at coordinating transportation, housing and other infrastructure investments to protect the environment, address climate change, promote equitable development and provide infrastructure to support mobility and access in North Carolina.

Work Program and Prioritization—The agency will continue to apply TAM principles to refine the process of improving prioritization of transportation projects in the ten-year Plan and the five-year Work Program through 2022.

North Carolina Mobility Funds—To improve statewide mobility and access, the agency has developed a program called “Citizen Connect” where approximately \$170 million is expected to be generated by the North Carolina Mobility Fund between 2011 and 2014 and an additional \$58 million each year thereafter to be used to develop projects of statewide or regional significance. Project selection will be based on measurable criteria of safety, mobility and infrastructure health.

Outreach and Communications—Use of TAM principles and data-based decisions to ensure transparency in its decision-making process will continue to be a top priority for NCDOT. The outreach and collaboration will include working with the Governor’s Transportation Intergovernmental Advisory Group, collaborating with local government, business partners and using social media, websites and other traditional communication mechanisms to openly share information as well as to engage and obtain input from all stakeholders.

Additional information is available from the following:

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