

Department of Transportation

STRATEGIC PLAN

and

INFORMATION TECHNOLOGY PLAN

FY 2017 - 2019



By

Secretary Nicholas J. Tennyson, Department of Transportation

October 2016

This page left blank intentionally

Contents

1.	Transportation Strategic Plan Executive Summary	1
2.	Transportation Quick Reference Guide	2
3.	Enterprise Opportunities	7
4.	Transportation Vision, Mission, and Values	1
5.	Transportation Goals, Objectives, and Measures of Success	2
6.	Transportation Information Technology Plan Executive Summary	12
7.	Transportation Information Technology Quick Reference Guide	13
8.	Transportation IT Vision, Mission, and Values	27
9.	Transportation IT Goals, Objectives, and Measures of Success	28
10.	Transportation IT Organizational Structure.....	29
11.	Enterprise IT Opportunities	30
	Appendix A: Transportation Major IT Projects	31
	Appendix B: Transportation IT Accomplishments and Progress Review	50

This page left blank intentionally

1. Transportation Strategic Plan Executive Summary

The North Carolina Department of Transportation (NCDOT) uses strategic planning to identify its priority goals and clearly document and communicate how it plans to achieve them. It is important to recognize that a strategic plan does not fully describe all of the work activities an agency performs.

NCDOT's Strategic Plan clearly communicates to our customers and employees our long-term vision, core values, near-term mission statement, and six strategic goals for the next two years. Our strategic goals encompass our expected outcomes, performance measures, and strategies to achieve each. In concert with the Governor's Priorities, our six strategic goals are:

- *Make transportation safer*
- *Provide GREAT customer service*
- *Deliver and maintain our infrastructure effectively and efficiently*
- *Improve the reliability and connectivity of the transportation system*
- *Promote economic growth through better use of our infrastructure*
- *Make our organization a great place to work*

NCDOT uses a three-phase approach to refine, develop, and adopt its biennial strategic plan. The initial phase is a thorough review of any current vision, values, mission statement, and goals for the agency. NCDOT's Executive Leadership Team begins reviewing the active mission, goal and value statements and works to refine the language of each to better reflect the current demands on our agency's services and priorities of the governor.

The next phase in the strategic planning process requires that the agency further clarify the results expected for each goal and identify the targeted strategies that will be impled to achieve success. To that end, "goal champions" from the executive leadership team are appointed to oversee and ultimately hold the agency accountable for delivering positive results (including defining goal success, performance measures, and strategies).

Six work groups – one for each goal, with leadership from the Executive Leadership Team, then works to clearly describe the desired outcomes and performance measures for each goal, and agency-wide strategies or actions that NCDOT will focus and utilize to achieve each goal. Each work group consists of employee team members representing business units and diverse functions from across the agency.

The outcome, a refined strategic plan every other year, provides guidance for all business units within NCDOT as they plan their work activities for next two fiscal years. NCDOT's divisions and business units will then ensure their daily operations and efforts align with the overall priorities and strategy of the department. Furthermore, NCDOT's strategic plan aligns to our employee's performance management system (NCVIP), ensuring what employees do each day is reflected in the agencies vision, values, mission and goals.

2. Transportation Quick Reference Guide

Goal 1 - Make Transportation Safer.		
Objective 1.1 – Reduce fatalities by at least 2 percent or greater		
1.1.1 – Fatality rate/count	Strategy	<i>Employ evidence-based enforcement activities.</i>
		<i>The fatality rate is calculated as the number (or count) of statewide fatalities per year divided by the total vehicle miles traveled in 100 millions.</i>
1.1.2 – Crash rate/count	Strategy	<i>Improve the quality of transportation safety data. Utilize sound engineering principles & practices to promote safety.</i>
		<i>The crash rate is calculated as the number (or count) of statewide crashes per year divided by the total vehicle miles traveled in 100 millions.</i>
1.1.3 – Severe injury rate/count	Strategy	<i>Better utilize sound engineering principles to promote safety. Renew focus on employee's responsibility to model safe behavior and practices while driving and to report safety concerns when appropriate.</i>
		<i>The severe injury rate is calculated as the number (or count) of statewide severe injuries per year divided by the total vehicle miles traveled in 100 millions.</i>
1.1.4 – Personal restraint usage	Strategy	<i>Maximize educational opportunities to promote safe behaviors of all transportation users.</i>
		<i>A visual seat belt survey is conducted each June in 25 counties to determine North Carolina's overall seat belt usage rate, as required by the National Highway Traffic Safety Administration.</i>
Goal 2 – Provide GREAT Customer Service.		
Objective 2.1 – Achieve an overall customer satisfaction result of 85 percent or greater		
2.1.1 – Percentage of positive customer feedback (through customer surveys)	Strategy	<i>Develop and implement effective customer feedback tools. Acquire, utilize, and maintain user-friendly business tools. Embed a customer service function within the organizational structure.</i>
		<i>Tracking basic feedback from our customers is central to the surveys and everyday business of the agency. The first such annual statewide customer survey was conducted in 2015 and will be reinitiated in 2016.</i>
2.1.2 – Percentage of employee attendance in classes related to customer service	Strategy	<i>Develop a tailored Customer Service Training Program incorporating industry standards.</i>
		<i>NCDOT has implemented customer service training modules in recent years, specifically at the Division of Motor Vehicles. Tracking our employee attendance in these modules leads to improved agency customer satisfaction results.</i>

2.1.3 – Percentage of customers reached	Strategy	<p><i>Continually educate external and internal customers on available services and share information about the Department. Develop and implement effective customer feedback tools.</i></p>
		<p><i>Tracking those customers and citizens with whom NCDOT has had contact through various media and social media outlets allows for the transparency and fluidness of important NCDOT information.</i></p>
2.1.4 – Percentage change in response time (DMV customer wait time)	Strategy	<p><i>Continually analyze and evaluate business processes, including staffing and locations.</i></p>
		<p><i>The reduction in time that DMV customers must wait to receive services is important to the overall satisfaction of those citizens that require interaction for motor vehicle services.</i></p>

Goal 3 – Deliver and Maintain Our Infrastructure Efficiently and Effectively.

Objective 3.1 - Let to contract at least 85 percent of our planned projects on schedule

3.1.1 – Percentage of projects completed on schedule	Strategy	<p><i>Develop priorities and realistic, attainable schedules that help establish stability in program delivery. Increase departmental and partner knowledge to improve transportation decision-making and processes. Effectively plan, coordinate and provide feedback to make sure we include everyone needed to do it right the first time in a timely and efficient manner.</i></p>
		<p><i>Project completion is defined as when a project is “advertised for bid” and awarded to a contractor for construction (or “let to contract”). The percentage is computed by comparing the number of projects that were planned for let at beginning of a year to the actual number of projects that were let in that year.</i></p>
3.1.2 – Percentage of budget to actual expenditures	Strategy	<p><i>Employ existing and new data, technology and products to improve results and save time and money.</i></p>
		<p>NCDOT is a state agency that has legislative authority to operate on a “cash flow” basis. The department may let contracts against revenue it expects to receive in the future. The Department’s objective is to forecast receipts and expenditures within a specific threshold to effectively manage cash.</p>

Objective 3.2 – Achieve an infrastructure health composite index of 75 percent or greater

3.2.1 – Infrastructure health composite index (by asset type and mode)	Strategy	<p><i>Develop priorities and realistic, attainable schedules that help establish stability in program delivery. Effectively plan, coordinate and provide feedback to make sure we include everyone needed to do it right the first time in a timely and efficient manner.</i></p>
		<p><i>The infrastructure health index is defined as a composite score based on pavement condition ratings, bridge health index scores, and roadside feature condition scores. Three comprehensive statewide surveys are used to evaluate the condition of the state highway system and scored on a periodic basis.</i></p>

3.2.2 – Percentage change in composite infrastructure health conditions per dollar invested	Strategy	<p><i>Employ existing and new data, technology and products to improve results and save time and money. Increase departmental and partner knowledge to improve transportation decision-making and processes.</i></p>
	<p><i>This measure is a variation of the infrastructure health composite index accounting for dollars invested on each type of infrastructure element or asset.</i></p>	

Goal 4 – Improve the reliability and connectivity of the transportation system.

Objective 4.1 - *Increase the percentage when highway travel times are met based on speed limits to 80 percent or greater*

4.1.1 – Percentage of time when travel times are met based on highway speed limits	Strategy	<p><i>Implement new and improve existing traffic operations strategies. Better market and communicate transportation information.</i></p>
	<p><i>This measure tracks the assumed travel time from one location to another based on speed limits. Travel time is measured using a Travel Time Index that uses data provided by a third party and compares the actual travel time to the ideal travel time as defined by the posted speed limits.</i></p>	

4.1.2 – Percentage of travel times between hubs that are adequate for each logical mode	Strategy	<p><i>Strengthen our partnerships (with communities, governments and businesses). Improve the mobility within our corridors.</i></p>
	<p><i>In order to connect our residents to jobs and commerce, this measure tracks the length of time it takes to travel from one type of transportation option to another, and whether it is adequate based on user needs. The Governor's 25-Year Vision defines hubs as the activity centers within the state.</i></p>	

Objective 4.2 – *Increase the percentage of time when trips with published schedules are met to 80 percent or greater*

4.2.1 – Percentage of time when trips with published schedules are met	Strategy	<p><i>Strengthen our partnerships (with communities, governments and businesses). Better market and communicate transportation information.</i></p>
	<p><i>The Ferry Division and intrastate passenger rail (Amtrak) publish regular trip schedules for customers and the traveling public. This measure combines the "on-time performance" of passenger rail and ferry services and tracks whether expectations are sufficiently met.</i></p>	
4.2.1 – Percentage of logical mode-to-mode transfer points that are co-located	Strategy	<p><i>Strengthen our partnerships (with communities, governments and businesses). Better market and communicate transportation information.</i></p>
	<p><i>This measure tracks whether adequate transportation modes are available to the public and are efficiently coupled together (co-located) within certain activity centers.</i></p>	

Goal 5 – Promote economic growth through better use of our infrastructure.

Objective 5.1 - Increase the economic vitality of North Carolina		
5.1.1 – Change in overall highway travel time	Strategy	<i>Cyclically refine methodologies and data sources to ensure consistency and accuracy. Establish a permanent, centralized, and accountable economic performance function. Establish repository to store data.</i>
		<i>Travel time is measured using a Travel Time Index (TTI) that uses data provided by a third party and compares the actual travel time to the ideal travel time as defined by the posted speed limits. A value of 1.00 means traffic is moving at the posted speed limit, while a result greater than 1.00 means traffic is slower than the posted speed limit.</i>
5.1.2 – Percentage change in overall tax revenue	Strategy	<i>Develop stronger data sharing agreements between NCDOT and partners. Establish repository to store data.</i>
		<i>An expanded market for goods and services will change the overall tax revenue. A well-maintained transportation infrastructure will contribute to the expansion. Although NCDOT has minimal direct control over tax revenue, NCDOT does influence economic growth by providing these services and maintaining the transportation system at a desired level.</i>
5.1.3 – Percentages change in jobs and Gross State Product Index	Strategy	<i>Develop stronger data sharing agreements between NCDOT and partners. Establish repository to store data.</i>
		<i>Aligned with the Governor's priorities, this measure tracks the change in the number of North Carolina jobs created and the total Gross State Product Index over time.</i>
Goal 6 – Make our organization a great place to work.		
Objective 6.1 - Achieve an employee engagement survey score of 5.25 or greater (on a 7-point scale).		
6.1.1 – Employee engagement survey results	Strategy	<i>Develop an engagement leadership team for engagement training based on biennial survey results. Better implement internal safety incentives, rewards, and recognition programs.</i>
		<i>Employee engagement is defined as the extent to which employees commit to something or someone in the organization and how hard they work and long they stay as a result of that commitment. This measure is based on an annual employee survey.</i>
6.1.2 – Percentage of DOT employees that are paid at the market rate for their classification and level	Strategy	<i>Endorse market pay strategies for our employees. Treat current NCDOT employees well (reward loyalty).</i>
		<i>This measure has been initiated to track the number of employees that receive market rate compensation compared to those that are not meeting statewide objectives.</i>
6.1.3 – Number of preventable accidents or injuries	Strategy	<i>Create a web-based employee incident and injury reporting tool (for tracking preventable injuries or accidents). Better implement internal safety incentives, rewards, and recognition programs.</i>

in the work place	<i>Employee safety is a top priority of the Department. To better achieve this priority employee safety measures have been tracked for years with substantial improvements gained. A key component is to eliminate any accident (to an asset) or injury (to an employee) that is preventable. A preventable accident or injury is one in which the employee failed to exercise reasonable precaution to prevent the occurrence.</i>	
6.1.4 – Rate of recordable employee injuries	Strategy	<i>Create a web-based employee incident and injury reporting tool (for tracking recordable employee injuries). Better implement internal safety incentives, rewards, and recognition programs (same as 6.1.3).</i>
		<i>A recordable employee injury is defined by OSHA. The calculated rate is based on the number of cases and the total working hours so performance results can be aligned regardless of the size of the business unit and division.</i>
6.1.5 – Percentage of employees retained after three years	Strategy	<i>Develop an engagement leadership team for engagement training based on survey results (same as 6.1.1).</i>
		<i>Employee retention is critical to the health of an organization. This measure tracks the number of employees retained after their initial start date over a three-year period.</i>

3. Enterprise Opportunities

3.1. Potential Initiatives

Data Integration and Analytics – Currently only half of all agency data is integrated into a data warehouse for cross analytics and internal data-sharing. To continue to improve upon the analysis and visual representation of performance data, additional support is desired to integrate remaining data systems into an automated fashion for more robust data forecasting and analytical tools.

Web-based Transportation Data Center – NCDOT is a data rich organization. With new federal transportation laws emphasizing measuring performance and setting targets, local governments and other agencies are seeking transportation data to make decisions and comply with federal requirements. The establishment of a “transportation data center” available on the web, would streamline the process to share qualified and valid NCDOT data to our local and state partners across the state.

Business Unit Work Planning Improvements – NCDOT has a very effective strategic planning process that adopts an agency vision, mission, and goals. North Carolina state government has a very sound result-based performance management system with the establishment of NCVIP for annual employee appraisals. In order to connect the agencies strategic goals with the employee’s annual goals, a business unit work planning process must be emphasized as the means to develop specific goals and measurables for each division and unit within the department. NCDOT currently has such a process but is limited by the technology and process tools to be completely efficient and effective.

3.2. Collaborative Opportunities

Statewide Strategic Planning and Performance Dashboarding – It is important for all state agencies to unite under the same strategic direction as to not compete with one another. In order to maximize resources and improve decision-making, a statewide strategic planning effort would effectively align all state services with its strategic direction. This would align financial and human resources. To establish transparency and accountability, the adopted statewide strategic plan with its goals, objectives, performance measures, and strategies would be the basis to a statewide government performance dashboard depicting real-time results to residents and partners of our state.

Statewide Data Center – State government has a plethora of valuable and critical data. In order to be efficient and effective across all branches of government and within the executive branch, a statewide data center would be a clearinghouse and library of accurate, valid, and up-to-date state data available for public and state use. Data available to the public and agencies may include, but not be limited to, transportation, environmental, agriculture, commerce, economic and financial, healthcare, human services, public safety, and education.

Integration and automation of agency performance results with NCVIP system – NCDOT maintains accountability for various strategic measurables such as highway crash rates, bridge condition scores, project delivery rates, etc. These measures, many that are included as goals or tasks on employee or manager NCVIP performance plans, are maintained and tracked within internal management systems maintained by DOT. If these systems and results were connected to the NCVIP, it would not require a manual effort to periodically gather and enter results into the evaluations related to NCVIP for thousands of NCDOT employees.

4. Transportation Vision, Mission, and Values

4.1 Vision

NCDOT: A global leader in providing innovative transportation solutions.

4.2 Mission

Connecting people, products, and places safely and efficiently with customer focus, accountability, and environmental sensitivity to enhance the economy and vitality of North Carolina.

4.3 Values

Safety (and Health): We are dedicated to providing a safe transportation network and work environment.

Customer Service: We serve our customers in a respectful, professional and timely manner.

Diversity (and Inclusion): We respect one another while drawing strength from our diverse opinions, ideas and experiences.

Integrity (and Ethics): We earn and maintain trust through data-driven decisions, accountability, and transparency.

Quality: We pursue excellence in delivering our projects, programs, services and initiatives.

Teamwork (and Collaboration): We work together using our diverse strengths and skills, collaborating to solve problems and serve our communities.

Innovation (and Creativity): We promote the development and use of new and better solutions.

**Note: Values included in parentheses denote the additional statewide values as defined by the Office of State Human Resources and included in NCVIP.*

5. Transportation Goals, Objectives, and Measures of Success

Goal 1 - Make transportation safer

NCDOT is committed to connecting people, products, and places safely. Focusing our work efforts and paying attention to every detail provides a safe traveling environment for our citizens, visitors, and employees. We will accomplish our goal of making transportation safer by reducing fatalities, severe injuries, and crashes on our entire transportation network.

1.1 Objective – Reduce fatalities by at least 2 percent or greater

Transportation related fatalities are an industry standard measure. Although NCDOT's strives for zero fatalities, a reduction in the annual trend would exceed expectations. Crashes, severe injuries, and seat belt usage are all leading indicators to the fatality rate outcome.

1.1.1 Measures of Success – Fatality rate/count

The fatality rate is calculated as the number (or count) of statewide fatalities per year divided by the vehicle miles traveled (VMT) in 100 millions. VMT is defined as the total distance traveled in miles by all motor vehicles in a selected region in a given period of time. The transportation network fatality data is sourced from the Division of Motor Vehicles' Crash Database and managed by the Traffic Engineering Accident Analysis System. The Transportation Mobility and Safety Division tracks this measure.

Strategies/Initiatives – Better utilize sound engineering principles to promote safety. Improve the quality of transportation safety data. Renew focus on employee's responsibility to model safe behavior and practices and to report safety concerns when appropriate. Maximize educational opportunities to promote safe behaviors of all transportation users. Employ evidence-based enforcement activities.

1.1.2 Measures of Success – Severe injury rate/count

The injury rate is calculated as the number (or count) of statewide severe injuries per year divided by the vehicle miles traveled (VMT) in 100 millions. VMT is defined as the total distance traveled in miles by all motor vehicles in a selected region in a given period of time. A severe injury is defined by the USDOT. The injury data is sourced from the Division of Motor Vehicles' Crash Database and managed by the Traffic Engineering Accident Analysis System. The Transportation Mobility and Safety Division tracks this measure.

Strategies/Initiatives - Better utilize sound engineering principles to promote safety. Improve the quality of transportation safety data. Renew focus on employee's responsibility to model safe behavior and practices and to report safety concerns when appropriate. Maximize educational opportunities to promote safe behaviors of all transportation users. Employ evidence-based enforcement activities.

1.1.3 Measures of Success – Crash rate/count

The crash rate is calculated as the number (or count) of statewide vehicle related crashes per year divided by the vehicle miles traveled (VMT) in 100 millions. VMT is defined as the total distance traveled in miles by all motor vehicles in a selected region in a given period of time. All transportation crash data is sourced from the Division of Motor Vehicles' Crash Database and managed by the Traffic Engineering Accident Analysis System. The Transportation Mobility and Safety Division tracks this measure.

Strategies/Initiatives – Better utilize sound engineering principles to promote safety. Improve the quality of transportation safety data. Renew focus on employee's responsibility to model safe behavior and practices while driving and to report safety concerns when appropriate. Maximize educational opportunities to promote safe behaviors of all transportation users. Employ evidence-based enforcement activities.

1.1.4 Measures of Success – Personal restraint usage (seat belt, child/booster seats)

NCDOT's goal for vehicle occupant protection is to increase personal restraint usage use through education and enforcement. NCDOT conducts a seat belt survey in 25 counties each June to determine North Carolina's overall seat belt usage rate, as required by the National Highway Traffic Safety Administration. The selection of counties is based on fatality and road segment data. NCDOT strives to increase the statewide safety belt use rate by decreasing fatalities from non-restraint use, increasing usage rates among the 16 to 24 year old age group, and increasing the usage rate among male drivers. The Governor's Highway Safety Program tracks this measure annually.

Strategies/Initiatives - Improve the quality of transportation safety data. Renew focus on employee's responsibility to model safe behavior and practices and to report safety concerns when appropriate. Maximize educational opportunities to promote safe behaviors of all transportation users. Employ evidence-based enforcement activities.

Goal 2 - Provide GREAT customer service

Aligned with the Governor's Vision, NCDOT is committed to delivering its services with a customer focus. We will accomplish our goal of providing GREAT customer service through increasing customer satisfaction – focusing on our "GREAT" customer service program that stands for Greeting, Respecting, Empathizing, Answering, and Thanking each customer, providing efficient options to access information and services, educating employees and the public about the Department, and improving the delivery of all services.

2.1 Objective – Achieve an overall customer satisfaction result of 85 percent or greater

To objectively determine the perceptions and level of satisfaction of NCDOT customers, a random, address-based sample of North Carolina residents is essential. Assessing customer satisfaction provides NCDOT useful feedback for a variety of subject areas including identifying performance improvement areas.

2.1.1 Measures of Success – Percentage of positive customer feedback (through customer surveys)

Tracking basic feedback from our customers is central to the surveys and everyday business of the agency. The first such annual statewide customer survey was conducted in 2015 and will be reinitiated in 2016. The Performance Metrics Office tracks this measure.

Strategies/Initiatives - Develop and implement effective customer feedback tools. Acquire, utilize, and maintain user-friendly business tools. Embed a customer service function within the organizational structure.

2.1.2 Measures of Success – Percentage of employee attendance in classes related to customer service.

NCDOT has implemented customer service training modules in recent years, specifically at the Division of Motor Vehicles, and tracking our employee attendance in the courses leads to overall agency customer satisfaction results. Human Resources tracks this measure.

Strategies/Initiatives - Develop a tailored Customer Service Training Program incorporating industry standards.

2.1.3 Measures of Success – Percentage of customers reached.

Tracking customers and citizens with whom NCDOT has had contact through various media and social media outlets allows for the transparency and fluidness of important NCDOT information. This measure of success is new and tracked by the Communications Office.

Strategies/Initiatives - Continually educate external and internal customers on available services and share information about the Department. Develop and implement effective customer feedback tools.

2.1.4 Measures of Success – Percentage change in response time (DMV customer wait time)

The reduction in time that Division of Motor Vehicle (DMV) customers must wait to receive services is important to the overall satisfaction of those citizens that require interaction. This measure, relatively new, is being implemented at all DMV facilities that interact with customers through a transaction tracking system. This measure of success is tracked by the Governance Office and DMV.

Strategies/Initiatives - Continually analyze and evaluate business processes, including staffing and locations.

Goal 3 - Deliver and maintain our infrastructure effectively and efficiently

NCDOT is committed to delivering and maintaining our infrastructure safely and efficiently with customer focus, accountability, and environmental sensitivity. We will accomplish our goal of delivering

and maintaining our infrastructure effectively and efficiently by improving program and project delivery across all transportation modes, optimizing use of available resources to strengthen our infrastructure, and strategically improving our infrastructure to meet existing and future needs.

3.1 Objective – Let to contract at least 85 percent of our planned projects on schedule.

Delivering transportation projects efficiently and effectively is essential to NCDOT being successful. With dynamics of the project development process, achieving a delivery rate of 85 percent or greater meets expectations.

3.1.1 Measures of Success – Percentage of projects completed on schedule.

Project completion is defined as when a project is “advertised for bid” and awarded to a contractor for construction (or “let to contract”). This step generally means that the construction phase of a project begins. The process step of “advertising for bid” is also referred to as “letting.” The Pre-Construction phase of a project is complete once it has been awarded to a contractor for construction. The percentage is computed by comparing the number of projects that were planned for let at beginning of a year to the actual number of projects that were let in that year. This measure of success is tracked by the Schedule Management Office.

Strategies/Initiatives - Develop priorities and realistic, attainable schedules that help establish stability in program delivery. Employ existing and new data, technology and products to improve results and save time and money. Increase departmental and partner knowledge to improve transportation decision-making and processes. Effectively plan, coordinate and provide feedback to make sure we include everyone needed to do it right the first time in a timely and efficient manner.

3.1.2 Measures of Success – Percentage of budget to actual expenditures.

NCDOT is a state agency that has legislative authority to operate on a “cash flow” basis. The department may let contracts against revenue it expects to receive in the future. Advantages of a cash flow method are: 1) acceleration of multi-year project awards; 2) user fees strategically expended for immediate needs; and 3) cash is not “idle” as multi-year project expenditures are matched to multi-year revenue collections. The Department’s objective is to forecast receipts and expenditures within a specific threshold to effectively manage cash. This measure of success is tracked by the Financial Management Division, Funds Administration Section.

Strategies/Initiatives - Employ existing and new data, technology and products to improve results and save time and money. Increase departmental and partner knowledge to improve transportation decision-making and processes. Develop priorities and realistic, attainable schedules that help establish stability in program delivery. Effectively plan, coordinate and provide feedback to make sure we include everyone needed to do it right the first time in a timely and efficient manner.

3.2 Objective – Achieve an infrastructure health composite index of 75 percent or greater.

In addition to delivery of transportation projects, the upkeep, health, and maintenance of our infrastructure is just as important. Our transportation infrastructure includes our bridges, pavements, and other roadside features such as guardrails, signs, lighting and vegetation.

3.2.1 Measures of Success – Infrastructure health composite index (by asset type and mode).

The infrastructure health index is defined as a composite score based on pavement condition, bridge health index, and roadside feature condition scores. Three comprehensive statewide surveys are used to evaluate the condition of the state highway system: (1) the Maintenance Condition Survey, (2) the Bridge Condition Survey, and (3) the Pavement Condition Survey. Pavement condition is defined as the percent of highway lane miles in good condition. Good condition for pavement is defined as a Pavement Condition Rating (PCR) value of 80 or higher. Bridge health is defined as the percent of bridges in good condition. A bridge is considered to be in good condition if the Level of Service (LOS) for Deck, Sub-Structure and Super Structure are all greater than or equal to 6. The Roadside Feature Condition is defined as a weighted value score that represents the physical condition of all highway features and elements excluding pavements and bridges. The composite index is a weighted average of the three metrics described above. This measure of success is tracked by the Transportation Asset Analytics Unit.

Strategies/Initiatives - Develop priorities and realistic, attainable schedules that help establish stability in program delivery. Employ existing and new data, technology and products to improve results and save time and money. Increase departmental and partner knowledge to improve transportation decision-making and processes. Effectively plan, coordinate and provide feedback to make sure we include everyone needed to do it right the first time in a timely and efficient manner.

3.2.2 Measures of Success – Percentage change in composite infrastructure health conditions per dollar invested.

See measure 3.2.1. This measure is a variation of the infrastructure health composite index accounting for dollars invested and expended on each type of infrastructure element or asset. This measure of success is new.

Strategies/Initiatives - Employ existing and new data, technology and products to improve results and save time and money. Increase departmental and partner knowledge to improve transportation decision-making and processes. Develop priorities and realistic, attainable schedules that help establish stability in program delivery. Effectively plan, coordinate and provide feedback to make sure we include everyone needed to do it right the first time in a timely and efficient manner.

Goal 4 - Improve the reliability and connectivity of the transportation system

NCDOT is committed to connecting people, products, and places. We will accomplish our goal of improving the reliability and connectivity of the transportation system by operating dependable connections among major hubs and destinations across the state and improving connectivity within and between all modes of transportation.

4.1 Objective – Increase the percentage when highway travel times are met based on speed limits to 80 percent or greater.

Moving people and products in an efficient, safe, and fast way is an expectation of the traveling public. This objective emphasizes standards for high volume Interstates to operate at or above 50 mph during the peak travel hours.

4.1.1 Measures of Success – Percentage of time when travel times are met based on highway speed limits.

This measure tracks the assumed travel time from one location to another based on speed limits. Travel time is measured using a Travel Time Index (TTI) that uses data provided by a third party and compares the actual travel time to the ideal travel time as defined by the posted speed limits. A value of 1.00 means traffic is moving at the posted speed limit, while a result greater than 1.00 means traffic is slower than the posted speed limit. A result less than 1.00 means traffic is moving above the posted speed limit, which is feasible in rural and less populated areas. The data is gathered and presented in time segments based on different traffic congestion patterns. The desired change is to decrease the time it takes to travel from one destination to another on any normal day. This measure of success is managed by the Traffic Systems Operations Unit in the Transportation Mobility and Safety Division.

Strategies/Initiatives – Implement new and improve existing traffic operations strategies. Improve the mobility within our corridors. Strengthen our partnerships (with communities, governments and businesses). Better market and communicate transportation information.

4.1.2 Measures of Success – Percentage of travel times between hubs that are adequate for each logical mode.

In order to connect our residents to jobs and commerce, this measure tracks the length of time it takes to travel from one type of transportation option to another, and whether it is adequate based on user needs. The Governor's 25-Year Vision defines hubs as the activity centers within the state. "Logical mode" refers to the transportation means that would reasonably be considered. For example, a ferry would not be a logical mode for a trip from Manteo to Charlotte, nor would a bicycle be a logical mode for a trip from Asheville to Greenville. It is also important to measure the transfer time from mode to mode. For example, can a user travel by public transit to the airport efficiently. This new measure of success is tracked by the Transportation Mobility and Safety Division.

Strategies/Initiatives - Implement new and improve existing traffic operations strategies. Improve the mobility within our corridors. Strengthen our partnerships (with communities, governments and businesses). Better market and communicate transportation information.

4.2 Objective – Increase the percentage of time when trips with published schedules are met to 80 percent or greater.

Moving people and products in an efficient, safe, and fast way is an expectation of the traveling public. This objective emphasizes accomplishing and delivering on the published travel schedules of passenger rail services within North Carolina and ferry services along the North Carolina coast.

4.2.1 Measures of Success – Percentage of time when trips with published schedules are met.

The Ferry Division and intrastate passenger rail (Amtrak) publish regular schedules for customers and the traveling public. In order to meet public expectations, it is critical for these schedules to be delivered on time. This measure combines the “on-time performance” of passenger rail and ferry services and tracks whether expectations are sufficiently met. This measure of success is maintained by the Performance Metrics Office.

Strategies/Initiatives - Implement new and improve existing traffic operations strategies. Improve the mobility within our corridors. Strengthen our partnerships (with communities, governments and businesses). Better market and communicate transportation information.

4.2.2 Measures of Success – Percentage of logical mode-to-mode transfer points that are co-located.

This measure tracks whether adequate transportation modes (bus, rail, air, walking, etc.) are available to the public and are efficiently coupled together (co-located) within certain activity centers. For example, can a user travel by public transit to the airport efficiently, and vice versa. This new measure of success is managed by the Transportation Mobility and Safety Division with some data provided by the non-highway divisions.

Strategies/Initiatives - Implement new and improve existing traffic operations strategies. Improve the mobility within our corridors. Strengthen our partnerships (with communities, governments and businesses). Better market and communicate transportation information.

Goal 5 - Promote economic growth through better use of our infrastructure

Aligned with the Governor’s Vision, NCDOT is committed to enhancing the economy and vitality of North Carolina. We will accomplish our goal of promoting economic growth through better use of our infrastructure by improving the reliability of all modes of our transportation network, increasing access

to key infrastructure (such as interstates, airports, rail, ports, etc.), and reducing business costs (for transportation purposes).

5.1 Objective – Increase the economic vitality of North Carolina.

Aligned with the Governor’s priorities, the economic vitality of North Carolina is critical to NCDOT’s success. Our objective is to increase the economy with all appropriate decisions.

5.1.1 Measures of Success – Change in overall highway travel time.

Travel time is measured using a Travel Time Index (TTI) that uses data provided by a third party and compares the actual travel time to the ideal travel time as defined by the posted speed limits. A value of 1.00 means traffic is moving at the posted speed limit, while a result greater than 1.00 means traffic is slower than the posted speed limit. A result less than 1.00 means traffic is moving above the posted speed limit, which is feasible in rural and less populated areas. The data is gathered and presented in time segments based on different traffic congestion patterns. The desired change is to decrease the time it takes to travel from one destination to another. This measure of success is managed by the Traffic Systems Operations Unit in the Transportation Mobility and Safety Division.

Strategies/Initiatives - Establish a permanent, centralized, and accountable economic performance function. Develop stronger data sharing agreements between NCDOT and partners. Establish repository to store data. Cyclically refine methodologies and data sources to ensure consistency and accuracy.

5.1.2 Measures of Success – Percentage change in overall tax revenue.

An expanded market for goods and services will change the overall tax revenue. A well-maintained transportation infrastructure will contribute to the expansion. Although NCDOT has minimal direct control over tax revenue, NCDOT does influence economic growth by providing these services and maintaining the transportation system at a desired level of service. This newly adopted measure of success is tracked by our Division of Planning and Programming with data provided by the Departments of Revenue and Commerce.

Strategies/Initiatives - Establish a permanent, centralized, and accountable economic performance function. Develop stronger data sharing agreements between NCDOT and partners. Establish repository to store data. Cyclically refine methodologies and data sources to ensure consistency and accuracy.

5.1.3 Measures of Success – Percentages change in jobs and Gross State Product Index.

Aligned with the Governor’s priorities, an increase in jobs and the economic output of North Carolina is critical to our success. This measure tracks the change in the number of North Carolina jobs created and the total Gross State Product Index over time. This new measure of success is being developed by our Division of Planning and Programming.

Strategies/Initiatives - Establish a permanent, centralized, and accountable economic performance function. Develop stronger data sharing agreements between NCDOT and partners. Establish repository to store data. Cyclically refine methodologies and data sources to ensure consistency and accuracy.

Goal 6 - Make our organization a great place to work

NCDOT is committed to valuing our employees and motivating each team member to provide the highest quality of services to the citizens of North Carolina. We will accomplish our goal of making our organization a great place to work by providing fair compensation, preventing employee injuries, and improving employee satisfaction and engagement.

6.1 Objective – Achieve an employee engagement survey score of 5.25 or greater (on a 7-point scale).

Engaged employees transfer to satisfying customers, which leads to overall achieved performance results for the agency. The objective is to have a high performing and engaged workforce at NCDOT by collecting data through an employee survey.

6.1.1 Measures of Success – Employee engagement survey results.

Employee engagement is defined as the extent to which employees commit to something or someone in the organization and how hard they work and long they stay as a result of that commitment. The employee engagement index is calculated by averaging an employee's emotional commitment, rational commitment, discretionary effort and intent to stay at NCDOT. The results are generated through a 42 question department-wide employee survey conducted annually that measures the feelings and attitudes of employees. This measure of success is tracked by the Performance Metrics Office and administered by the Human Resources Division.

Strategies/Initiatives - Develop an engagement leadership team for engagement training based on biennial survey results. Treat current NCDOT employees well (reward loyalty). Better implement internal safety incentives, rewards, and recognition programs.

6.1.2 Measures of Success – Percentage of DOT employees that are paid at the market rate for their classification and level.

All employees desire and deserve fair and equitable compensation. This measure has been initiated to track the number of employees that receive market rate compensation compared to those that are not meeting statewide objectives. Compensation of employees is a challenging dynamic that will take years to affect. This new measure of success is being developed by our Human Resources Division.

Strategies/Initiatives - Treat current NCDOT employees well (reward loyalty). Endorse market pay strategies for our employees. Better implement internal safety incentives, rewards, and recognition programs. Create a web-based employee incident and injury reporting tool. Develop an engagement leadership team for engagement training based on biennial survey results.

6.1.3 Measures of Success – Number of preventable accidents or injuries in the work place.

Employee safety is the Department's top priority. To better achieve this priority, employee safety measures have been tracked with substantial improvements gained in recent years. A key component is to eliminate any accident (to an asset) or injury (to an employee) that is preventable. A preventable accident or injury is one in which the employee failed to exercise reasonable precaution to prevent the occurrence. This measure of success is a new metric tracked by the Safety and Risk Management Unit.

Strategies/Initiatives - Create a web-based employee incident and injury reporting tool (for tracking preventable accidents or injuries). Better implement internal safety incentives, rewards, and recognition programs. Treat current NCDOT employees well (reward loyalty). Endorse market pay strategies for our employees. Develop an engagement leadership team for engagement training based on biennial survey results.

6.1.4 Measures of Success – Rate of recordable employee injuries.

Employee safety is a top priority of the Department. A recordable employee injury is defined by OSHA as any work-related fatality, any work-related injury or illness that results in loss of consciousness, days away from work, restricted work, or transfer to another job, any work-related injury or illness requiring medical treatment beyond first aid, or any work-related diagnosed case of cancer, chronic irreversible diseases, fractured or cracked bones or teeth, and punctured eardrums. Although always treated, minor first aid is not considered "recordable." The calculated rate is based on the number of cases and the total working hours so results can be aligned regardless of the size of the business unit and division. This measure of success is managed by the Safety and Risk Management Unit.

Strategies/Initiatives - Create a web-based employee incident and injury reporting tool (for tracking recordable employee injuries). Better implement internal safety incentives, rewards, and recognition programs (same as 6.1.3).

6.1.5 Measures of Success – Percentage of employees retained after three years.

Employee retention is critical to the health of an organization. This measure tracks the number of employees retained after their initial start date over a three-year period. This measure of success is managed by the Human Resources Division.

Strategies/Initiatives - Develop an engagement leadership team for engagement training based on biennial survey results. Treat current NCDOT employees well (reward loyalty). Better implement internal safety incentives, rewards, and recognition programs. Endorse market pay strategies for our employees (same as 6.1.1).

6. Transportation Information Technology Plan Executive Summary

DOT Information Technology is tasked with ensuring safe, efficient and effective use of the latest computer and automation technologies and to provide a full range of information processing service to the Department of Transportation. These services include new software system development, maintenance of existing systems, support of all computer software and hardware, technology consultation, IT training, and end user and customer service support. Underlying all of these responsibilities is the need to assess our information security and cyber security postures and to elevate them to acceptable levels as determined by federal and state laws, and operating principles of the agency regarding data classification.

The Information Technology organization is tasked with providing technology services to all divisions of the Department of Transportation. This results in a wide variety of initiatives across the spectrum of technical skills and functions.

The emphasis of this plan over the next biennium will be on deploying technology to improve productivity and performance and to address citizen, transportation systems and infrastructure, optimize process and governance and improve agency collaboration. Among other activities, there is focus on enterprise services, such as Enterprise Content Management, expand electronic signature capability, and increase citizen online options for DMV and Transportation actions.

Additionally, the agency has established an internal maturity measurement matrix, based on industry standards and has assessed core processes against required maturity levels. Critical gaps continue to be addressed through work in multiple area with a current focus on the deployment of an information technology support and services toolset (ITSSM). This will help address significant gaps in NCDOT processes related to change, issue response and risk management.

The work within NCOT is dynamic as needs change and priorities are adjusted. The information contained in this plan reflects the work underway at the time of its creation. This plan should be considered, and will be treated, as a living document with updates made as significant business and legislative changes occur.

7. Transportation Information Technology Quick Reference Guide

Goal 1 - Make Transportation Safer			Costs	Anticipated Implementation and Closeout Dates
Objective 1.1 – Road Safety				
1.1.1 – Timely crash reporting	IT Initiative	<i>eCrash Replacement</i>	Admin Budgeted: \$371,280.00	Implementation: December 2017
		<i>Meet legislative mandate to replace current Crash Reporting System and provide third party maintenance of the replacement solution.</i>	State Funded: \$1,561,445.00	Closeout: March 2018
1.1.2 – Control Alcohol Abuse Offenders	IT Initiative	<i>Ignition Interlock Management System</i>	Admin Budgeted: \$300,080.00	Implementation: December 2016
		<i>Provide electronic means for approved vendors to submit automated data using standardized format</i>	State & Grant Funded: \$1,308,089.00	Closeout: November 2016
1.1.3 – Identify lighting systems not operating as designed, allow faster dispatch	IT Initiative	<i>Roadway Lighting Control and Monitoring System</i>	Admin Budgeted: \$128,240.00	Implementation: April 2017
		<i>Identifying lighting systems not operating as designed, make lighting control accessible to authorized users real-time</i>	State Funded: \$289,096.00	Closeout: June 2017
1.1.4 – Increase efficiency in data	IT Initiative	<i>Traffic Monitoring System Software</i>	Admin Budgeted: \$78,250.00	Implementation: September 2017

<i>loading, validation, processing, analysis, viewing, and reporting</i>	<i>Minimize human errors by automatically uploading counter files to new application</i>		State Funded: \$1,987,250.00	Closeout: December 2017
Objective 1.2 – Protect Airways				
1.2.1 – Rules for owning and operating UAS in NC	IT Initiative	Unmanned Aircraft System (UAS) Website	Admin Budgeted: \$449,362.00	Implementation: December 2016
		<i>Educate public about rules and regulations concerning UAS in NC and work to establish ability to create permitting options as needed and required</i>	State Funded: \$342,160.00	Closeout: January 2017
Goal 2 – Provide Great Customer Service				
Objective 2.1 – Customer-friendly methods of payment accepting				
2.1.1 – Upgraded card-present credit card stations	IT Initiative	Common Payment Process	Admin Budgeted: \$226,836.27	Implementation: August 2017
		<i>Standardize platform for Point of Sale with next generation credit card terminals and acceptance procedures according to security standards.</i>	State Funded: \$2,971,145.73	Closeout: February 2018
2.1.2 – Pay fees via personal DMV portal	IT Initiative	My DMV Portal	Admin Budgeted: \$1,120,373.00	Implementation: August 2017
		<i>Continue to improve customer interaction with citizens that can manage DMV relationship via single sign-on with increased functionality.</i>	State Funded: \$1,020,458.00	Closeout: October 2017

2.1.3 – Decrease transaction processing time, reduce number of rejections received on error reports	IT Initiative	Remittance Processor – STARS Interface	Admin Budgeted: \$100,000.00	Implementation: March 2017
		Eliminate delays in renewal processing, decrease lead times for registration renewal by mail	State Funded: \$345,500.00	Closeout: June 2017
2.1.4 – Capability to collect payment and refund payments from/to citizens for requested administrative hearings	IT Initiative	Virtual Hearings and Fees	Admin Budgeted: \$107,870.00	Implementation: August 2017
		Capability to conduct DMV Hearings at designated DMV locations, online scheduling, and method to accept payments / provide refunds	State Funded: \$1,543,122.00	Closeout: September 2017
Objective 2.2 – Increase Efficiency				
2.2.1 – Users can search information themselves	IT Initiative	District Road Files and Encroachments	Admin Budgeted: \$84,116.00	Implementation: April 2016
		Standardize business processes relating to documentation on operating and maintaining highways and structures	State Funded: \$719,075.00	Closeout: August 2016

2.2.2 – Reduce foot traffic at DMV, and calls to Help Desk	IT Initiative	DMV IVR Phase II	Admin Budgeted: \$944,000.00	Implementation: April 2018
		Implement screen-pop technology, email, and chat for Customer Service Representatives, add call-back assist/virtual hold, card payment via IVR	State Funded: \$2,457,576.40	Closeout: July 2018
2.2.3 – Remotely monitor (and participate in) customer volume, wait times and services, upgrade kiosks	IT Initiative	DMV Vehicle Services Queuing	Admin Budgeted: \$264,639.69	Implementation: September 2019
		Enhancements to Driver Services Queuing, customer can place themselves in queue online and DMV employees can monitor activity and expand to Vehicle Services offices.	State Funded: \$3,817,778.90	Closeout: February 2020
2.2.4 – 24 x 7 self-service transactions	IT Initiative	Replacement of SADLS legacy system		TBD
		Continue the replacement of legacy SADLS system for driver services.		TBD
2.2.5 – Provide framework to enable implementation of kiosks and portable units	IT Initiative	NCDMV Optimization	Admin Budgeted: \$234,550.39	Implementation: August 2017
		Reduce customer wait and service times in branches by providing options such as kiosks and portable units to handle DMV services	State Funded: \$5,337,449.61	Closeout: October 2017
2.2.6 – Reduce the steps it takes to find information	IT Initiative	NCDOT Web Site Redesign and Restructuring	Admin Budgeted: \$1,696,529.00	Implementation: March 2017
		Enable citizens and users to view the NCDOT.gov website using the latest technology in mobile devices and tablets	State Funded: \$2,725,887.00	Closeout: May 2017

2.2.7 – Remote, convenient hearings, online scheduling	IT Initiative	<i>Virtual Hearings and Fees</i>	See above Goal 2.1.4	Implementation: August 2017
		<i>More efficient scheduling options for hearings, better process for storing and retrieving virtual hearings and implementation of new hearing fee structure.</i>	State Funded: \$1,543,122.00	Closeout: September 2017
Objective 2.3 – Educate the Public				
2.3.1 – Provide rules and regulations concerning UAS owning and operation in NC	IT Initiative	<i>Unmanned Aircraft System (UAS) Website</i>	Admin Budgeted: \$449,362.00	Implementation: December 2016
		<i>Educate the Public about the rules and regulations concerning UAS owning and operating in NC including permitting process, permit verification, and accepting fees</i>	State Funded: \$342,160.00	Closeout: January 2017
Goal 3 – Deliver and Maintain our Infrastructure Effectively and Efficiently				
Objective 3.1 – Provide Enterprise Platform				
3.1.1 – Support collaboration, communication, and content management	IT Initiative	<i>3C and Data Services Framework</i>	Admin Budgeted: \$2,233,482.00	Implementation: November 2016
		<i>Migrate content management information to SharePoint, allow users to personalize dashboard</i>	State Funded: \$7,428,491.00	Closeout: January 2017

3.1.3 – <i>Comprehensive repository for collision data and reports</i>	IT Initiative	<i>eCrash Replacement</i>	See Goal 1.1.1	Implementation: December 2017
		<i>Provide electronic submission application for collision data and reports with predictive analytics with an option to purchase reports</i>	State Funded: \$1,561,445.00	Closeout: March 2018
<i>3.1.4 – Space within EADS environment where DIT can cross agency, migrate users, workstations, servers, and applications</i>	IT Initiative	<i>Enterprise Active Directory Service (EADS)</i>	Admin Budgeted: \$2,636,241.00	Implementation: May 2019
		<i>Manage, through new platform enterprise resources across all agencies while having permissions to seamlessly move users, workstations, or servers more easily</i>	State Funded: \$13,768,599.70	Closeout: July 2020
<i>3.1.5 – GIS solution that has common architecture, Is scalable</i>	IT Initiative	<i>Road Operations and Management Effort</i>	Admin Budgeted: \$1,618,652.00	Implementation: October 2016
		<i>Establish consolidated and authoritative source of NCDOT statewide LRS data</i>	State Funded: \$4,992,183.00	Closeout: March 2017
Objective 3.2 – Safety of State Employees				
<i>3.2.1 – Overhaul current alarm system to improve reliability, robustness, and response times to alarmed events</i>	IT Initiative	<i>Facilities Access Control System (FACS)</i>	Admin Budgeted: \$30,000.00	Implementation: July 2017
		<i>Replace existing Access Control System and integrate existing Intrusion Detection Systems</i>	State Funded: \$16,515,025.00	Closeout: October 2017

Objective 3.3 – Improvement and Availability of Business Systems				
3.3.1 – Updated, user-friendly, self-service help desk, change management, asset management, and service request management	IT Initiative	IT Service Management Tool Implementation	Admin Budgeted: \$316,420.00	Implementation: March 2017
		<i>State-of-the-art solution to provide improved management and control over IT system infrastructure, resulting in reduced risk of outages, improved efficiency of IT service delivery</i>	State Funded: \$549,818.00	Closeout: October 2017
3.3.2 – Improve flexibility, adaptability and responsiveness, reduce duplicate system functions and work activities, deter fraudulent motor vehicle activities	IT Initiative	Replacement of the Vehicle Safety and Emission Testing Solution	Admin Budgeted: \$1,031,596.00	Implementation: March 2016
		<i>Provide more effective, efficient, timely, reliable, and integrated operation and support for NCDMV to include reporting capabilities needed for program management, oversight and legislative inquiries</i>	State Funded: \$7,374,786.00	Closeout: April 2016
3.3.3 – Improve Environmental Input Request for use by NEW and HES tracking applications	IT Initiative	PDEA Tracking Upgrade	Admin Budgeted: \$384,538.00	Implementation: January 2017
		<i>Create HES tracking application, leveraging the existing NEW application and its platform to facilitate communications and provide time and cost savings through a single user interface</i>	State Funded: \$2,480,922.00	Closeout: February 2017
3.3.4 – Provide a tool to create	IT Initiative	Pre-Construction Collaboration	Admin Budgeted: \$662,462.67	Implementation: November 2017

<i>design collaboration sites using templates and authorize appropriate user access</i>	<i>Enable internal DOT engineers and external consultants to collaborate on design work online.</i>		<i>State Funded: \$1,455,360.91</i>	<i>Closeout: March 2018</i>
<i>3.3.5 – Create electronic interface to STARS to assist with mailed-in renewals</i>	IT Initiative	<i>Remittance Processor – STARS Interface</i>	<i>Admin Budgeted: \$100,000.00</i>	<i>Implementation: March 2017</i>
	<i>Create ability for employees to access the AQUIRT application and STARS simultaneously via dual monitors on one workstation, and to validate mailed-in renewals</i>		<i>State Funded: \$345,500.00</i>	<i>Closeout: June 2017</i>
<i>3.3.6 – Provide software that supports and facilitates standardization of Right of Way business processes</i>	IT Initiative	<i>Right of Way Management System</i>	<i>Admin Budgeted: \$892,500.00</i>	<i>Implementation: March 2018</i>
	<i>Replace legacy system with COTS-based system used for acquisition of lands and rights of way used for construction and improvements of highways which are part of the State Highway System</i>		<i>State Funded: \$1,500,000.00</i>	<i>Closeout: November 2018</i>
<i>3.3.7 – Ability for better integration and data sharing, new online editing features, quality gains, streamlined reporting processes</i>	IT Initiative	<i>Road Operations and Management Effort</i>	<i>Admin Budgeted: \$1,618,652.00</i>	<i>Implementation: October 2016</i>
	<i>Add automation and functionality to the NCDOT Linear Referencing System with multiple linear referencing methods, dynamic route representation, timeAware LRS, and a single source of linear measurements</i>		<i>State Funded: \$4,992,183.00</i>	<i>Closeout: March 2017</i>
<i>3.3.8 – Eliminate manual processes,</i>	IT Initiative	<i>Traffic Monitoring System Software</i>	<i>Admin Budgeted: \$78,250.00</i>	<i>Implementation: September 2017</i>

<i>minimize human errors by automating upload counter files rather than writing count info on maps by hand</i>	<i>Implement a traffic monitoring system software solution which will increase efficiency in data loading, validation, processing, analysis, viewing, and reporting</i>		<i>State Funded: \$946,000.00</i>	<i>Closeout: December 2017</i>		
<i>3.3.9 – Provide data-driven prioritization process to improve project evaluation methodology with better quality data</i>	IT Initiative	<i>Trans Online Planning Prioritization Programming System</i>	<i>Admin Budgeted: \$500,000.00</i>	<i>Implementation: December 2017</i>		
	<i>Allow Planning, Prioritization, and Programming to work together to improve project prioritization process by automating integration of data needed to support the process</i>		<i>State Funded: \$3,600,000.00</i>	<i>Closeout: May 2018</i>		
Goal 4 – Improve the Reliability and Connectivity of the Transportation System						
Objective 4.1 – Manage Traffic Information						
<i>4.1.1 – Control traffic cameras, message signs, speed sensors, video walls, highway advisory radio, road weather information</i>	IT Initiative	<i>ATMS Infrastructure Alignment</i>	<i>Admin Budgeted: \$233,376.00</i>	<i>Implementation: March 2017</i>		
	<i>Provide infrastructure hardware and networking designed to support a statewide Intelligent Transportation System with multiple regional Transportation Management Centers</i>		<i>State Funded: \$4,083,420.00</i>	<i>Closeout: March 2017</i>		
<i>4.1.2 – Improve multi-agency</i>	IT Initiative	<i>ATMS Software Integration</i>	<i>Admin Budgeted: \$311,168.00</i>	<i>Implementation: November 2016</i>		

<i>response to incidents that require government response (emergency or special event such as hurricane)</i>	<i>Implement a command and control system that provides operators with a single consistent interface to manage an incident from detection to incident clearance and operate all ITS devices for TMC.</i>		<i>State Funded: \$4,520,748.00</i>	<i>Closeout: November 2016</i>
<i>4.1.3 – Provide a GIS solution that has a common architecture, is scalable, and is editable online</i>	IT Initiative	<i>Road Operations and Management Effort</i>	<i>Admin Budgeted: \$1,618,652.00</i>	<i>Implementation: October 2016</i>
		<i>Take NCDOT Linear Referencing System and dependent business data to the next level in automation and functionality, replace LARS and ARID</i>	<i>State Funded: \$4,992,183.00</i>	<i>Closeout: March 2017</i>
Objective 4.2 – Improve Mobility and Capacity on Roadways				
<i>4.2.1 – Provide 5.8 mile bypass used to improve mobility and capacity on US 74</i>	IT Initiative	<i>Monroe Bypass</i>	<i>Admin Budgeted: \$</i>	<i>Implementation: September 2018</i>
		<i>Allow for high-speed region travel between Wingate and Marshville including tools which will be used to assist in repayment of bonds needed for financing roadway</i>	<i>State Funded: \$26,185,000.00</i>	<i>Closeout: December 2018</i>
<i>4.2.2 – Provide centralized control and monitoring system for roadway lighting</i>	IT Initiative	<i>Roadway Lighting Control and Monitoring System</i>	<i>Admin Budgeted: \$128,240.00</i>	<i>Implementation: April 2017</i>
		<i>Improved mobility on roadways through controlling and maintaining adequate lighting</i>	<i>State Funded: \$289,096.00</i>	<i>Closeout: June 2017</i>
Goal 5 – Promote Economic Growth through Better Use of our Infrastructure				

Objective 5.1 – Options for Accepting Payments				
5.1.1 – Provide upgrade to current credit/debit card present terminals	IT Initiative	Common Payment Process	Admin Budgeted: \$226,836.27	Implementation: August 2017
	Provide a credit card solution for Point of Sale that also accepts debit cards and meets security standards		State Funded: \$2,971,145.73	Closeout: February 2018
5.1.2 – Allow renewal of driver license, duplicate driver license, ID cards and permit requests, and restoration of a driver license payments via telephone	IT Initiative	DMV IVR Phase II	Admin Budgeted: \$944,000.00	Implementation: April 2018
	Ability to accept credit card payments over the telephone		State Funded: \$2,457,576.40	Closeout: July 2018
Objective 5.2 – Revenue Opportunities				
5.2.1 – Add digital advertising to be added to the new queuing solution in LPA offices	IT Initiative	DMV Vehicle Services Queuing	Admin Budgeted: \$264,639.60	Implementation: September 2019
	Allow for digital advertising to display along with the queuing application at Driver License and Vehicle services offices		State Funded: \$2,917,778.90	Closeout: February 2020
5.2.3 – Include a toll system to the	IT Initiative	Monroe Bypass	Admin Budgeted: \$	Implementation: September 2018

bypass	<i>Tolls will be added to this bypass to be used to assist in repayment of bonds that were secured to finance the roadway</i>		State Funded: \$26,185,000.00	Closeout: December 2018		
5.2.4 – End contract with Verizon to lower the cost of NC Inspection process	IT Initiative	<i>Motor Vehicle Inspection and Law Enforcement System</i>	Admin Budgeted: \$1,031,596.00	Implementation: March 2016		
	<i>Cost of providing NC Inspection Service will be lowered</i>		State Funded: \$7,374,786.00	Closeout: April 2016		
5.2.6 – Implement application capable of collecting and refunding payments from/to citizens for requested administrative hearings	IT Initiative	<i>Virtual Hearings and Fees</i>	Admin Budgeted: \$107,870.00	Implementation: August 2017		
	<i>Provide capability to collect payment for virtual hearing fees. Ability to recover direct and indirect costs associated with conducting hearings.</i>		State Funded: \$1,543,122.00	Closeout: September 2017		
Goal 6 – Make our Organization a Great Place to Work						
Objective 6.1 – Improve Access to Data						
6.1.1 – Provide a master data framework that supports information from reporting to analysis	IT Initiative	<i>Data Management and Governance</i>	Admin Budgeted: \$1,102,920.00	Implementation: November 2017		
	<i>Make data more easily accessible, reduce redundancy, improve usability and consistency across multiple applications</i>		State Funded: \$7,076,000.00	Closeout: January 2018		

Objective 6.2 – Modernize Tools				
6.2.1 – Improve business processes, enhance delivery of services for NCDMV staff	IT Initiative	<i>DMV Applications Alignment and Interoperability</i>	Admin Budgeted: \$510,560.00	Implementation: January 2017
		<i>Modernize legacy applications, initiate process redesign, develop modernization strategy while maintaining operability of remaining legacy systems</i>	State Funded: \$924,440.00	Closeout: February 2017
6.2.2 – Provide self-service help desk, change management, asset management, and service request management	IT Initiative	<i>IT Service Management Tool Implementation</i>	Admin Budgeted: \$316,420.00	Implementation: March 2017
		<i>Provide a state of the art, user friendly, self-service solution that includes help desk, change management, asset management, and service request management</i>	State Funded: \$549,818.00	Closeout: November 2017
6.2.3 – Upgrade recording and transcription technology	IT Initiative	<i>Virtual Hearings and Fees</i>	Admin Budgeted: \$107,870.00	Implementation: July 2017
		<i>Provide web-based video-conferencing solution available on NCDOT network or Cloud</i>	State Funded: \$1,543,122.00	Closeout: September 2017
Objective 6.3 – Improve Work Environment				
6.3.1 – Deploy camera and enrollment workstation to every examiner, add kiosks and	IT Initiative	<i>NCDMV Optimization</i> <i>Improve efficiency of space and use of employees in meeting customer needs</i>	Admin Budgeted: \$234,550.39	Implementation: August 2017
			State Funded: \$5,337,449.61	Closeout: October 2017

<i>portable units</i>				
6.3.2 – Upgrade recording and transcription technology	IT Initiative	<i>Virtual Hearings and Fees</i>	Admin Budgeted: \$107,870.00	Implementation: July 2017
		<i>Allow hearings to be virtual to reduce Hearing Officer's travel costs and time</i>	State Funded: \$1,543,122.00	Closeout: September 2017

8. Transportation IT Vision, Mission, and Values

8.1 IT Vision

The North Carolina Department of Transportation (DOT) employs more than 10,000 people who oversee all modes of transportation in North Carolina, including highways, rail, aviation, ferries, public transit, and bicycle and pedestrian transportation. The department also oversees North Carolina's Division of Motor Vehicles. The Information Technology mission and goals and strategic plan are in support of the agency's mission, goals and strategic plan.

8.2 IT Mission

The Information Technology mission is to support the DOT mission of connecting people, products, and places safely and efficiently, with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina by delivering innovative, cost effective and reliable technology solutions, services and processes to DOT and to the residents of North Carolina.

8.3 IT Values

Safety (and Health): We are dedicated to providing a safe transportation network and work environment.

Customer Service: We serve our customers in a respectful, professional and timely manner.

Diversity (and Inclusion): We respect one another while drawing strength from our diverse opinions, ideas and experiences.

Integrity (and Ethics): We earn and maintain trust through data-driven decisions, accountability, and transparency.

Quality: We pursue excellence in delivering our projects, programs, services and initiatives.

Teamwork (and Collaboration): We work together using our diverse strengths and skills, collaborating to solve problems and serve our communities.

Innovation (and Creativity): We promote the development and use of new and better solutions.

**Note: Values included in parentheses denote the additional statewide values as defined by the Office of State Human Resources and included in NCVIP.*

9. Transportation IT Goals, Objectives, and Measures of Success

NCDOT Information Technology is tasked with ensuring safe, efficient and effective use of the latest computer and automation technologies and to provide a full range of information processing service to the Department of Transportation. These services include new software system development, maintenance of existing systems, support of all computer software and hardware, technology consultation, IT training, and end user and customer service support. Underlying all of these responsibilities is the need to assess our information security and cyber security postures and to elevate them to acceptable levels as determined by federal and state laws, and operating principles of the agency regarding data classification.

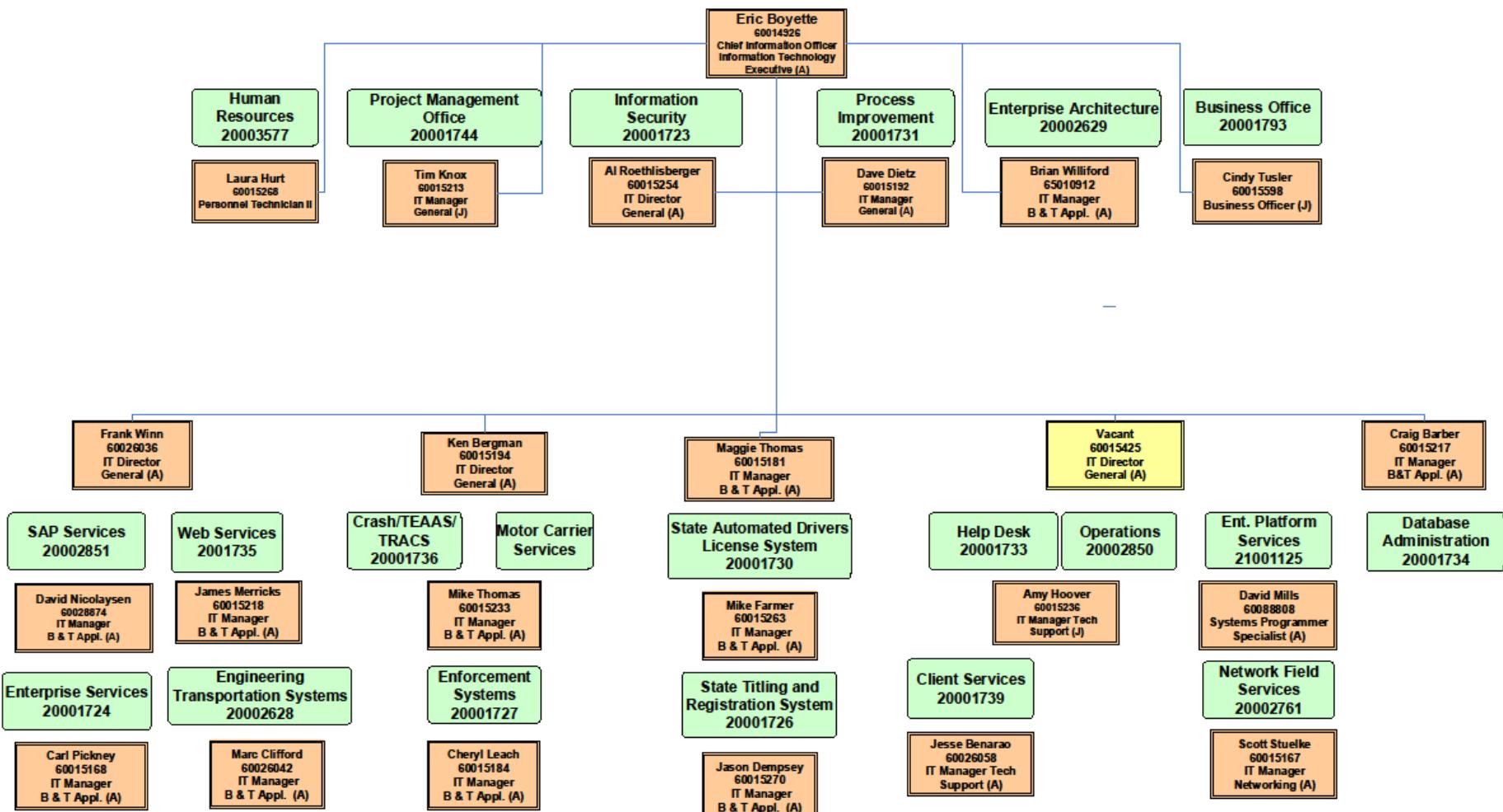
The Information Technology organization is tasked with providing technology services to all divisions of the Department of Transportation. This results in a wide variety of initiatives across the spectrum of technical skills and functions.

The emphasis of this plan over the next biennium will be on deploying technology to improve productivity and performance and to address citizen, transportation systems and infrastructure, optimize process and governance and improve agency collaboration. Among other activities, there is focus on enterprise services, such as Enterprise Content Management, expand electronic signature capability, and increase citizen online options for DMV and Transportation actions.

Additionally, the agency has established an internal maturity measurement matrix, based on industry standards and has assessed core processes against required maturity levels. Critical gaps continue to be addressed through work in multiple area with a current focus on the deployment of an information technology support and services toolset (ITSSM). This will help address significant gaps in NCDOT processes related to change, issue response and risk management.

The work within NCDOT is dynamic as needs change and priorities are adjusted. The information contained in this plan (see Section 7 above for details) reflects the work underway at the time of its creation. Success criteria, success measurements and how each supports DOT goals are indicated in the project's documentation which is maintained on DIT EPMO Touchdown system. This plan should be considered, and will be treated, as a living document with updates made as significant business and legislative changes occur.

10. Transportation IT Organizational Structure



11. Enterprise IT Opportunities

Expansion of the current SAP CRM Grant Platform and the ERP system.

11.1. Potential Initiatives

NA

11.2. Collaborative Opportunities

Credit Card accessibility for DOR, DNCR at remote locations.

Appendix A: Transportation Major IT Projects

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
<i>Initiative/Project Name</i>	<i>Provide a short description of this item (Please also indicate if this is a project or application with a cost over \$500,000).</i>	<i>To what agency goals and objectives and/or SCIO goals does this project relate?</i>	<i>Please identify funding strategy (expansion, grant, etc.)</i> <i>For existing projects, note whether they are fully funded or require expansion.</i>	<i>Provide a summary of any anticipated benefits.</i>	<i>Provide an estimated completion date for the project.</i>
New Initiatives/Projects					
<i>Discovery and Test Tool</i>	Automated test tool to reduce the time it takes to manually test procedures, scripts and scenarios <i>(over \$500,000)</i>	Goal 3 – Deliver and maintain our infrastructure effectively and efficiently	State Funded	Reduce project timeline, decrease in testing time and increase effectiveness of test cycles	4th Quarter, FY2017
<i>DMV Legislative Changes 16-17</i>	Allow more than 2 XSL permits to a customer Extend length of temp driving certificate to 60 days Require sign and symbol testing upon initial issuance of	Goal 1 – Make transportation safer	State Funded	Meet legislative mandates.	3rd Quarter, FY2017

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
	<p>license</p> <p>Require vision testing as part of in-person, in-office license renewal</p> <p>Change race code to AI for American Indian</p> <p>Right to hearing if license is being canceled for medical reasons</p> <p>Waive ID fees if person is developmentally disabled</p> <p>Modify STARS screen for removing titling and registration service stops</p> <p>Update for titling of manufactured homes</p> <p>Provide permanent plates for certain</p>				

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
	<p>transit providers</p> <p>Change registration period for official plates</p> <p>Add option of JTROS to title application</p> <p>Pre 1981 can be registered without VIN</p> <p>Remove signature line on mail-in renewals</p> <p>Amend moped definition</p> <p>(over \$500,000)</p>				
<i>Meteorological Towers</i>	<p>Provide a mechanism for public to notify State and register meteorological towers and collect a fee</p> <p>(over \$500,000)</p>	<p>Goal 1 – Make transportation safer</p> <p>Goal 5 – Promote economic growth through better use of our infrastructure</p>	State Funded	<p>Information for Division of Aviation, revenue from registration</p>	3rd Quarter, FY2017
<i>Product Evaluation Tool</i>	Comprehensive evaluation of new products for NCDOT	Goal 3 – Deliver and maintain our infrastructure effectively and		Help prioritize projects when resources are limited	3rd Quarter, FY2017

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
	projects <i>(over \$500,000)</i>	efficiently			
<i>Hazard and Risk Reporting</i>	Application for employees to report unsafe conditions <i>(over \$500,000)</i>	Goal 6 – Make our organization a great place to work		Reduce workers' compensation costs, reduce litigation and settlement costs, reduce whistleblower complaints, reduce external audits	4th Quarter, FY2017
<i>Automated License Plate Reader</i>	Promote enhanced enforcement and investigative capabilities for L&T inspectors <i>(over \$500,000)</i>	Goal 2 – Provide great customer service		Expand inspectors' collection of relevant data and expedite the process of comparing vehicle registration plates with lists of stolen, wanted, and other vehicles of interest	3rd Quarter, FY2017
<i>License and Theft Case Management</i>	Provide DMV L&T division tool to monitor and more efficiently process cases, eliminate redundant processes and enable automated workflow processes	Goal 2 – Provide great customer service and Goal 6 – Make our organization a great place to work.		More efficient support of L&T activities, elimination of duplicate manual system functions, deter fraudulent motor vehicle activities, and improve L&T	3rd Quarter, FY2018

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
	(over \$500,000)			reporting capabilities	
LITES Online Insurance	Provide ability for NC drivers to provide updates to their liability insurance online with verification. (over \$500,000)	Goal 1 – Make transportation safer and Goal 2 – Provide great customer service	State Funded	Reduce number of notices of liability insurance lapses, provide customers a means to update DMV records quicker and more efficiently and reduce number of suspected uninsured driver cases that are being processed by DMV.	4th Quarter, FY2018
Real Time Insurance Verification	Online Liability Insurance Verification process which would provide real time Liability Insurance Verification to Law Enforcement at the time of a Crash, DMV Staff, Dealers and License Plate Agency staff upon request. (over \$500,000)	Goal 1 – Make transportation safer and Goal 2 – Provide great customer service	Budget Expansion Request	Reduce number of uninsured drivers through near real time notification and verification of insurance liability, and improvement to enforcement of uninsured drivers.	3rd Quarter, FY2018
NCPorts Disaster	Establish a disaster	Goal 1 – Make	State Funded	Mitigate risk of NC	3rd Quarter, FY2017

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
<i>Recovery Solution</i>	recovery solution for the NCPorts authority	transportation safer and Goal 2 – Provide great customer service		Ports Authority currently does not have a disaster recovery solution in place and meet State procedures for critical IT applications.	
<i>McAfee Web Gateway</i>	Establishment of a Statewide contract for McAfee products for use by NCDOT and other interested agencies.	Goal 1 – Make transportation safer	State Funded	Currently a procurement vehicle is not in place for the purchasing of McAfee products that is core to the security of internet presence and intrusion prevention. Reduce the timeline to secure additional products to include refreshing current devices.	2nd Quarter, FY2018
<i>Safety Inspection Tracking System</i>	Establish a safety inspection solution to record and schedule facility safety inspections	Goal 6 – Make our organization a great place to work.	State funded	Increase efficiency of scheduling, recording and reporting of safety inspections	2nd Quarter, FY2018
<i>Emergency Communications</i>	Secure and implement a emergency communications	Goal 2 – Provide great customer service and Goal 6 – Make our	State funded	Provide efficient communications method to IT	2nd Quarter, FY2018

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
<i>Software Solution</i>	solution to provide a consistent and reliable communications device for emergency and critical application outages.	organization a great place to work.		resources and business partners in case of critical application outages and quicker return to normal operations.	
<i>STARS Monitoring Solution</i>	Implement results of 2016 proof of concept for monitoring solution for DOT IT applications, hardware and network.	Goal 2 – Provide great customer service and Goal 6 – Make our organization a great place to work.	State funded	Currently IT does not know if critical applications are down until notified by users or citizens. Solution will allow IT to be proactive and reduce or eliminate business impact of outages.	2nd Quarter, FY2018
<i>NMVTIS</i>	Implementation of AAMVA NMVTIS online verification of vehicle title applications to fully comply with federal regulations.	Goal 2 – Provide great customer service and Goal 6 – Make our organization a great place to work.	State Funded	Eliminate titling of stolen and cloned vehicles through real time inquiries and updates to national database, eliminate odometer alterations, assist law enforcement title fraud and vehicle	3rd Quarter, FY2017

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
				investigations and protect consumers.	
Contact Management	Establish a contact management system to track small and disadvantaged business interaction, outreach program, certification records of candidates, and enable financial services to qualified businesses. <i>(over \$500,000)</i>	Goal 2 – Provide great customer service and Goal 6 – Make our organization a great place to work.	State funded	Automate manual process, increase efficiency and increase participation in program which will grow small and disadvantaged businesses in NC	4th Quarter, FY2017
Existing Initiatives/Projects					
3C and Data Services Framework (ITP.00237)	Upgrade SharePoint 2013 environment along with SOA enabling platforms utilizing SQL MDS and SSIS, BizTalk, InRule, and Optimal <i>(over \$500,000)</i>	Provide state of the art services and solution in the most cost effective, highest quality, and most timely manner possible.	State funded S0064 / 150706	Provide integrated enterprise platform that will support collaboration, communication, and content management.	January 2017
ATMS Infrastructure Alignment	Deliver infrastructure hardware and	Improve IT networking and	State funded 150701	Reduce incident duration, reducing	2019

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
(ITP.00282)	networking designed to support a statewide Intelligent Transportation System with multiple regional Transportation Management Centers. <i>(over \$500,000)</i>	infrastructure to support existing ITS business needs along with ATMS software.		secondary accidents and reducing fatal incidents and injuries	
ATMS Software Integration (ITP.00281)	Provide redundant command and control capability to operator all ITS devices from multiple locations in the state and integrate all tools an operator uses to manage an incident into one application. <i>(over \$500,000)</i>	Implement a COTS ATMS software solution.	150701	Reduce incident duration, reducing secondary accidents and reducing fatal incidents and injuries	2018
Common Payment Process (ITP.00271)	Replacement of currently installed terminals with next generation Verifone credit card terminals. <i>(over \$500,000)</i>	Execute a credit card terminal refresh cycle and standardize the platform for Point of Sale that is acceptable to affected businesses.	151268 IO S0205	Reduce liability for card-present transactions and lowers cost per transaction.	4th Quarter, FY2017

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
<i>Data Management and Governance Project (ITP.00247)</i>	Improve quality and secure data, and make it more accessible to non-technical users. <i>(over \$500,000)</i>	Analyze, profile, and cleans data in order to provide accurate, consistent and reliable data to applications and systems that serve the citizens and other customer of NC DMV.	DMV Modernization 150021	Make activities and operation measures of business more readily available to the workforce charged with carrying it out to their level of need.	4th Quarter, FY2017
<i>DMV Applications Alignment and Interoperability (ITP.00238)</i>	Development of methodology and roadmap to modernize legacy DMV apps while enabling remaining legacy apps to continue to work. <i>(over \$500,000)</i>	Provide strategic vision for improving customer service and business practices.	DMV Modernization 150021	Obtain voice of customer, initiate process redesign, develop channel strategy	3rd Quarter, FY2017
<i>DMV IVR Phase II (ITP.00249)</i>	Take advantage of new capabilities on upgraded IVR platform to increase quality of existing services and introduce new service delivery channel to citizens. <i>(over \$500,000)</i>	Accept credit cards for: renew Class C driver license, duplicate driver license, ID cards and Permits, restoration of a driver license, call back assist/virtual hold	DMV Modernization 150021	Additional DMV services via IVR will reduce foot traffic at DMV, reduce calls to Help Desk, accept card payments, reduce customer frustration	4th Quarter FY2018

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
DMV SOA Center (ITP.00259)	Implement a SOA management framework within DOT IT. Change the way IT delivers solutions. <i>(over \$500,000)</i>	Optimize IT governance and processes to maximize organizational productivity.	DMV Modernization 150021	Align DMV Modernization with SOA Center and its policies and practices, adopt SOA technologies and architecture	4th Quarter, FY2017
DMV Vehicle Services Queuing (ITP.00254)	Provide queuing capabilities in Vehicle Services Offices (LPAs) and allow digital advertising. <i>(over \$500,000)</i>	Remotely monitor customer volume, wait times, and service times, upgrade kiosks	DMV Modernization 150021	Improve customer satisfaction and customer service	3rd Quarter, FY2018
Driver 360 (D360) (ITP.00280)	Complete replacement of SADLS legacy application (Phase II & III) <i>(over \$500,000)</i>	Improve overall customer service and efficiencies.	DMV Modernization 150021	Improve customer service, lower operating and maintenance costs	3rd Quarter, FY2018
eCrash Replacement (ITP.00290)	Statewide maintenance of Crash Reporting Program <i>(over \$500,000)</i>	Meet legislative mandate to replace current Crash Reporting System	DMV Modernization 150021	Automate crash reporting system, comply with Federal guidelines, reduce cost of operating crash reporting	4th Quarter, FY2018

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
<i>Enterprise Active Directory Service (EADS) (ITP.00286)</i>	Provide control of State IT assets, networking components, and services. <i>(over \$500,000)</i>	Provide core infrastructure, resources, and guidance necessary to enable organizations to build upon and transfer services to the infrastructure provided by DIT.	State funded 150701	NC will have the ability to manage, through DIT's new platform, enterprise resources across all agencies while having permissions to seamlessly move users, workstations, or servers more easily.	2nd Quarter, FY2019
<i>Enterprise Document and Imaging Management (EDIM) (ITP.00272)</i>	Provide an updated and supported enterprise document capture, store, retrieval, and manipulation solution to address DMV Strategic Business Objectives. <i>(over \$500,000)</i>	Migrate current NCDOT end of life document capture system, ImagePlus and ImagePlus Workstation Program to Content Manager z/OS V8.5.	State Funded 151267 S0140	Decrease operations and maintenance effort, eliminate microfilm scanning	3rd Quarter, FY2017
<i>Facilities Access Control System (FACS) (ITP.00273)</i>	Replace part or all of existing Access Control System and integrate existing Intrusion Detection Systems. Create a redundant site in case	Improve performance, prepare for future growth, and leverage advanced capabilities.	State Funded F0153 151268	Better accountability of ID badges, improved security enhancements, monitor security burglar alarms, reduce	1st Quarter, FY2018

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
	primary site is compromised. (over \$500,000)			maintenance costs	
<i>Ignition Interlock Management System (ITP.00234)</i>	Administer approved ignition interlock system (over \$500,000)	Increase efficiency, security, and accuracy of the business process through automation, create electronic means for approved vendors to submit data using standardized format	State Funded 151095 150017	Customer PII data will be secured, data will be more efficiently managed reducing costs	2nd Quarter, FY2017
<i>IT Service Management Tool Implementation (ITP.00248)</i>	Provide state of the art, user friendly, self-service solution that includes help desk, change management, asset management, and service request management. (over \$500,000)	Improved IT customer satisfaction, increased availability of business systems, improved management control over IT system infrastructure	State Funded 150701 F00045	Reduce cost of IT service delivery, maintenance, and operations, reduced risk of outages, improved efficiency of IT service delivery	2nd Quarter, FY2018
<i>Legislative Changes and Fee Increases 2015_2016 (ITP.00275)</i>	Registration renewal Notice, Insurance required for mopeds, dealer loaners, vehicle	Meet legislative mandates and business expectations	State Funded S0229	Increase DMV revenue, safer roadways, insurance for mopeds, reduce fraud, increased	3rd Quarter, FY2017

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
	registration late fees <i>(over \$500,000)</i>			service to citizens	
Monroe Bypass (ITP.00285)	Convert US-74 bus lanes to reversible HOV/HOT Express Lanes <i>(over \$500,000)</i>	Establish a toll and ITS system for this stretch of roadway	State Funded 64208-1550-TP01-Admin-400001, Field-401130	Improve mobility and capacity, allow for high-speed regional travel while maintaining access to properties along US 74. Tolls will be used to assist in repayment of bonds secured for financing the roadway.	2nd Quarter, FY2019
Motor Vehicle Inspection and Law Enforcement System (MILES) (ITP.00207)	Complete the final phases of the new Inspection Services system to include Web access. <i>(over \$500,000)</i>	Improve functionality, quality and cost efficiency of legacy systems.	State Funded 150054, 150017, 15002	Support inspection program, support law enforcement activities, deter fraudulent motor vehicle activities, improve law enforcement reporting capabilities	2nd Quarter, FY2017
My DMV Portal (ITP.00243)	Provide citizens a way to view their records and information online via all platforms. <i>(over \$500,000)</i>	Provide a portal that will modernize DMV's online service offerings and enhance abilities to DMV customers to manage	DMV Modernization 150021	Modernize DMV's web presentation, decrease dependence on in-person and phone communications,	2nd Quarter, FY2018

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
		their relationship with DMV		lessen employee involvement	
NCDMV Optimization (ITP.00255)	Provide updated driver license offices including cameras and kiosks, portable units/footlockers. (over \$500,000)	Improve customer service, create opportunities for growth, and improve efficiency of existing space and use of employees.	DMV Modernization 150021	Increase customer satisfaction with DMV, provide framework for lower cost channels for driver license and ID card renewal, reduce customer wait and service times	3rd Quarter, FY2017
NCDOT Web Site Redesign and Restructuring (ITP.00208)	Redesign and restructure the NCDOT.gov web site to meet the modern look and feel requirements. (over \$500,000)	Provide state of the art services and solution in the most cost effective, highest quality, and most timely manner possible.	State Funded 150002	Improve communications with NCDOT stakeholders; better mobile experience, improve connection for citizens to jobs, health care, education, and recreational experiences	4th Quarter, FY2017
PDEA Tracking Upgrade (ITP.00242)	Provide a web application that will track requests made to NES and HES (over \$500,000)	Single user interface for NES and HES customers	State Funded 150706	Time and cost savings, eliminate redundant data collection areas for Project Managers	4th Quarter, FY2017

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
<i>Pre-Construction Collaboration (ITP.00260)</i>	Provide better capabilities for transferring design files between DOT and design consultants. <i>(over \$500,000)</i>	Expand functionality and accessibility of CADD workspace to allow collaboration.	State Funded S0064 / 150706	Enable DOT engineers and external consultants collaboration,	3rd Quarter, FY2018
<i>Remittance Processor – STARS Interface (ITP.00276)</i>	Stabilize RTP system hardware and software, secure handling of sensitive customer data, and create an electronic interface to STARS. <i>(over \$500,000)</i>	Decrease renewal processing time, improve refund processing, decrease phone calls and customer complaints, improve validation of mailed renewals	DMV Modernization 150021	Eliminate delays in renewal processing, reduce call volume to call centers, improved customer satisfaction, cost savings of DMV labor and unnecessary refunds	4th Quarter, FY2017
<i>Right of Way Management System Project (ITP.00245)</i>	Implement a COTS based system that interfaces with internal applications to support acquisition of lands and rights of way used for construction and improvements of highways in the State Highway System.	Replace existing system with one that supports and facilitates standardization of Right of Way business processes.	State Funded 150670, 150528-S0002, 150701-F00045, 151082-S0022, 150017	Reduce cycle times by at least 25%, process standardization, cross-department integration and collaboration, detailed audit trail	1st Quarter, FY2018

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
	(over \$500,000)				
Road Operations and Management Effort (ITP.00221)	Replace two custom-developed systems (LARS and ARID) with a COTS solution. (over \$500,000)	Improve functionality, quality and cost efficiency of legacy systems.	State Funded 151082	Replace two custom systems with a COTS system, integration with more business units, implement an enterprise GIS solution, streamline support to Federal HPMS reporting	3rd Quarter, FY2017
Roadway Lighting Control and Monitoring System (ITP.00264)	Provide a roadway lighting control and monitoring system that meets DOT objectives defined in IGA Report. (over \$500,000)	Make transportation network safer by identifying lighting systems not operating as designed, make lighting control accessible to authorized users from anywhere in the US with GIS-based systems providing real-time monitoring	DMV Modernization 150021	Allow faster dispatch and repair, fewer roadway accidents due to poor lighting	4th Quarter, FY2017
SAP Hosting (ITP.00226)	SAP/BSIP hosting contract expires and a new hosting contract or transition to OITS	Improve functionality, quality and cost efficiency of legacy systems.	State Funded	Improve SAP BASIS support services and system performance, modernize SAP hardware	2nd Quarter, FY2017

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
	data centers. <i>(over \$500,000)</i>			infrastructure, reduce system complexity and support, resolve security deviations	
Traffic Monitoring System Software (ITP.00232)	Replace legacy system with more scalable, automated solution using a COTS application with integration to the new Roads and Highway system. <i>(over \$500,000)</i>	Eliminate manual processes; minimize human errors by automatically uploading counter files to new application, increase processing efficiency from data collection to reporting using interactive maps.	State Funded W02889	Increase efficiency in data loading, validation, processing, analysis, viewing, and reporting	1st Quarter, FY2018
Trans Online Plng Prioritization Pgmng Sys (TOP35) (ITP.00279)	Provide a solution that will improve overall project prioritization process. <i>(over \$500,000)</i>	Automate integration of all data needed to support prioritization process, provision a method for MPOs, RPOs and division to view and test all project recommendations on a GIS layer prior to submission for prioritization	State Funded	Improve project evaluation methodology, decreases TCO	3rd Quarter, FY2018

Initiative/ Project	Short Description (indicate if >\$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
<i>Unmanned Aircraft System (UAS) Website (ITP.00277)</i>	Provide a website that will provide education, knowledge testing, and permitting for unmanned aircraft. <i>(over \$500,000)</i>	Repository for up-to-date and relevant UAS information, NC testing and permitting requirements	State Funded 150041	Educate public about rules and regulation concerning UAS in NC	2nd Quarter, FY2017
<i>Virtual Hearings and Fees (ITP.00250)</i>	Provide a plan for conducting and charging a fee for virtual hearings. <i>(over \$500,000)</i>	Utilize and record audio and video on existing network, id remote offices for virtual hearings, provide scheduling, provide summary of outcomes and recommendations regarding virtual hearings	DMV Modernization 150021	Reduction of hearing officer's travel costs, more efficient scheduling, recover direct and indirect costs associated with hearings	2nd Quarter, FY2018

Appendix B: Transportation IT Accomplishments and Progress Review

FY15-17 Goal	FY15-17 Objective	FY15-17 Initiative	Progress Review	Anticipated Completion Date
Goal 5 – Promote economic growth through better use of our infrastructure	Objective 1.1 <i>Remain in compliance with FMCSA regulations to avoid withholding of Federal-Aid Highway funds</i>	Initiative 1.1.1 <i>2015 FMCSA – CDLIS 5 3 2 Compliance (ITP.00267)</i>	<i>Completed</i>	<i>10/03/2015</i>
Goal 2 – Provide Great Customer Service	Objective 2.1 <i>Improve network performance for NDOT Division and District field offices.</i>	Initiative 2.1.1 <i>Field Office Network Performance (ITP.00262)</i>	<i>Completed</i>	<i>09/01/2015</i>
Goal 2 – Provide Great Customer Service	Objective 3.1 <i>Reduce fraud and identify persons who have lost driving privileges by producing a tamper-resistant driver license/ID card.</i>	Initiative 3.1.1 <i>Next Generation Secure Driver License System (ITP.00200)</i>	<i>Completed</i>	<i>03/30/2016</i>
Goal 3 – Deliver and maintain our infrastructure effectively and efficiently	Objective 4.1 <i>Evaluate and score capital improvement projects across all modes of transportation.</i>	Initiative 4.1.1 <i>Prioritization 4 (ITP.00258)</i> Initiative 4.1.2 <i>District Road Files and Encroachments (ITP.00261)</i>	<i>Completed</i> <i>Completed</i>	<i>03/29/2016</i> <i>10/06/2016</i>
Goal 3 – Deliver and maintain our infrastructure effectively and efficiently	Objective 4.2 <i>Meet legislative mandate to require Moped registration and</i>	Initiative 4.2.1 <i>STARS Registration of Mopeds and Insurance</i>	<i>Completed</i>	<i>06/30/2016</i>

FY15-17 Goal	FY15-17 Objective	FY15-17 Initiative	Progress Review	Anticipated Completion Date
	<i>insurance liability</i>	<i>Liability (ITP.00268)</i>		
Goal 4 – Improve the reliability and connectivity of the transportation system	Objective 5.1 <i>Modernize TSA business processes to create and store highway project information so it can be easily accessed and searched.</i>	Initiative 5.1.1 <i>Transportation Systems Administration Content (ITP.00235)</i>	<i>Completed</i>	<i>04/01/2016</i>
