

# **Transformation Overview for Executive Committee on Highway Safety**



Presented by  
Victor Barbour, PE

***“Connecting People & Places in North Carolina”***

- Transformation Initiatives
- Mission, Goals, and Values
- Value Trees
- Leading and Lagging Indicators
- Executive Dashboard – Safety Gauge
- Safety Metrics on PDA's

# Why Transformation

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## STRAIN OF EXTERNAL TRENDS

### **Growing Demand on System**

- *Doubling of "Vehicle Miles Traveled" by 2030*
- *NC population projected to grow by 50% between 2000 and 2030, "7th most populous state by 2030"*

### **Increasing Cost of Supplies**

- *80% construction supplies inflation since 2002*
- *Spike in global asphalt, cement, and steel prices expected to continue*

### **Declining Funding**

- *State gas tax purchasing power has declined (inflation and mpg)*
- *Federal Highway Trust Fund program projected to run out of funding by 2009*
- *Transportation funding flat/declining for FY2008/09\**

# McKinsey Survey Findings

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## Strengths

- Change Commitment
- Financial Stability
- Technical Skills
- “Can Do Attitude”

## Shortcomings

- Organizational Structure...  
Silo’ed and non-collaborative
- Failing “Talent System”  
Recruit/Motivate/Develop
- Communication...  
Not pro-active

## Development Areas

- One Common Focused Direction
- Strategic-ness of Project and Services
- Improve Prioritization, Accountability, and Coordination of Core Processes
- Telling our Story...the good that we do

# Five Key Transformation Initiatives

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**Strategic Direction**

**Program and Project Delivery**

**Planning and Prioritization**

**Performance and Accountability**

**Improved Human Resource Mgt**

Strategic Direction

# Initiative 1



*Working together for a common purpose ...*



# Mission, Goals and Values

## NCDOT

### OUR MISSION

*Connecting people and places  
in North Carolina – safely and  
efficiently, with accountability  
and environmental sensitivity*

### OUR GOALS

- Make our transportation network **safer**
- Make our transportation network move people and goods more **efficiently**
- Make our infrastructure **last longer**
- Make our organization a place that **works well**
- Make our organization **a great place to work**



### OUR VALUES

- **SAFETY** - We strive for safety throughout our transportation networks as well as in our work and our daily lives.
- **CUSTOMER SERVICE** - We respond to our customers, both internal and external, in an open, professional and timely manner.
- **INTEGRITY** - We earn and maintain trust by responsibly managing the states assets, acting ethically, and holding ourselves accountable for our actions.
- **DIVERSITY** - We draw strength from our differences and work together in a spirit of teamwork and mutual respect.
- **QUALITY** - We pursue excellence in delivering our projects, programs, services and initiatives.

Values are ....

- What an organization stands for and believes in
- Behavioral expectations
- Manner in which we conduct our business



***Delivering our projects, programs and services effectively on time and on budget...***



## Planning and Prioritization

## Initiative 3



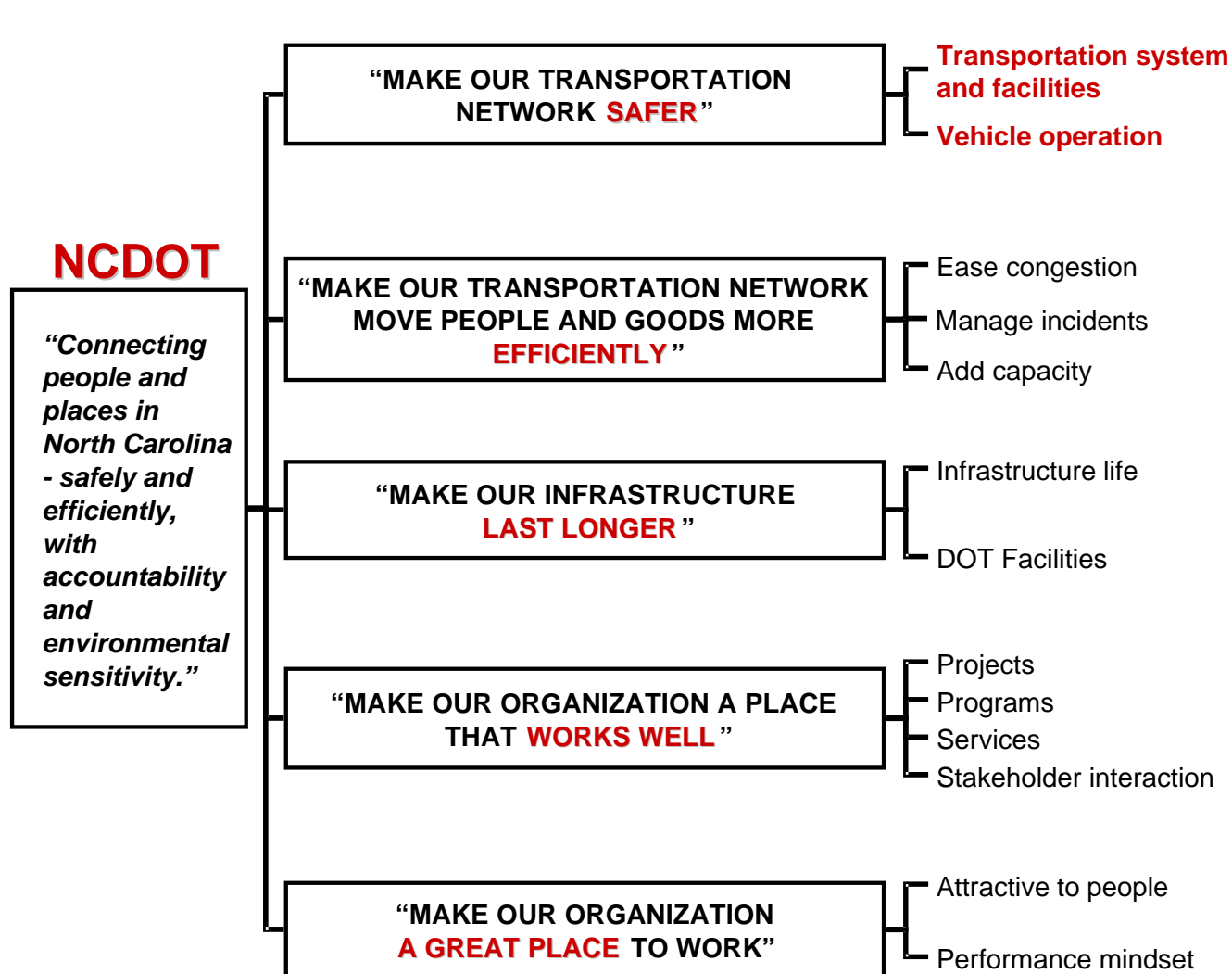
***Planning and prioritizing our work.....***



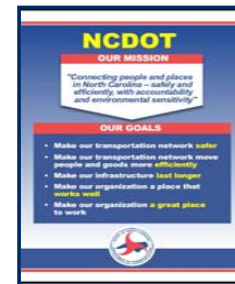
*Measuring our performance  
and reporting our successes...*



# NCDOT High Level Value Tree

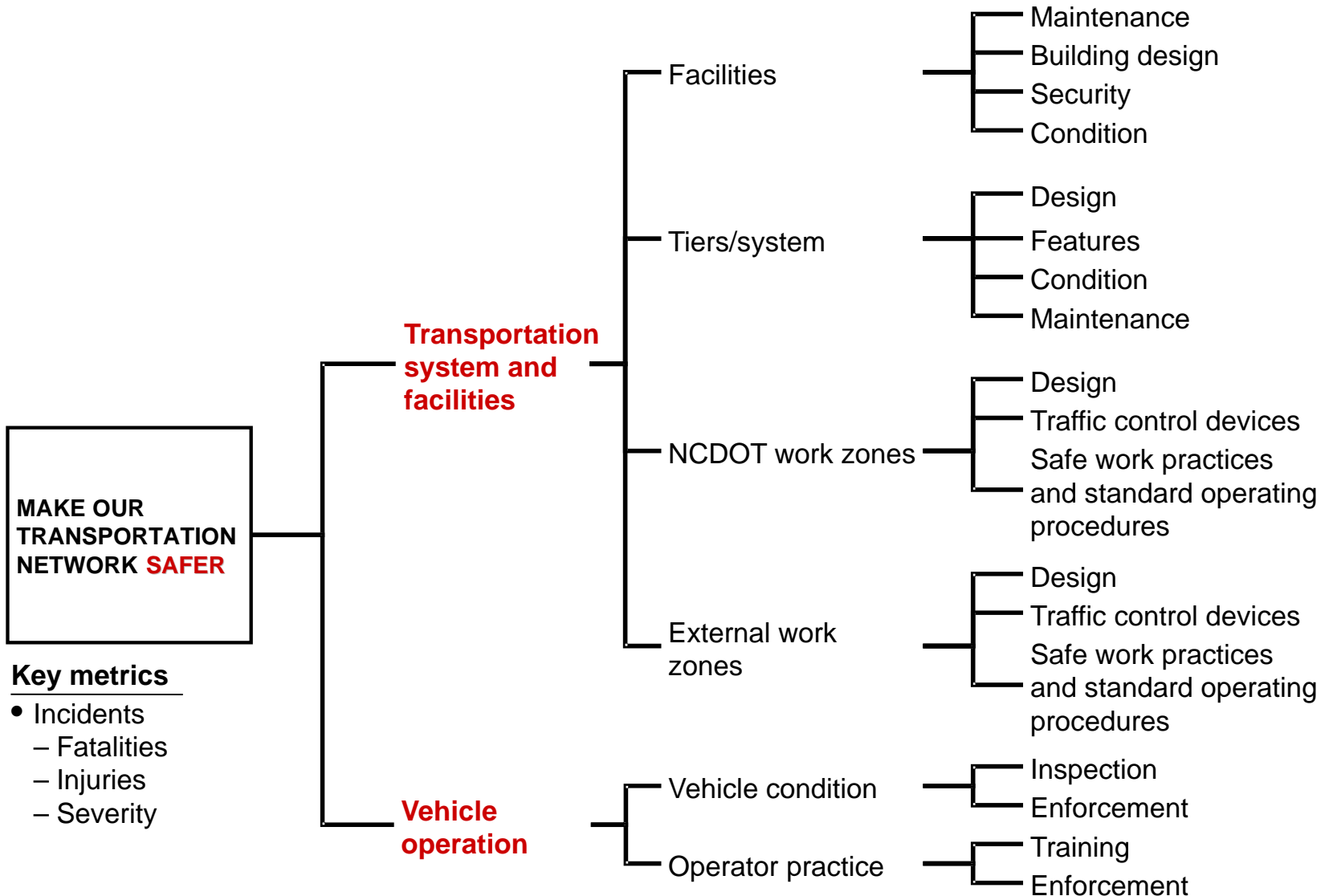


**Metrics should link to the Department’s Mission & Goals**



# Make Our Transportation Network SAFER

## Safety Value Tree



# Metrics

## SECRETARY OF TRANSPORTATION

	Metrics	Definition of Measure/Comments
<b>“Make our transportation network safer”</b>	<ul style="list-style-type: none"> <li>Fatalities</li> </ul>	<ul style="list-style-type: none"> <li>% improvement in fatalities compared to national goal of 1.0 fatality per 100 million vehicle miles traveled</li> </ul>
<b>“Make our transportation network move people and goods more efficiently”</b>	<ul style="list-style-type: none"> <li>Reliability on the System Strategic Highway Corridors and Regional Tier Routes</li> <li>Transit Service</li> </ul>	<ul style="list-style-type: none"> <li>Average operating speeds on Strategic Highway Corridors (SHC)</li> <li>Travel time reliability - standard deviation of average commuter time in selected urban areas</li> <li>% Decrease in congestion</li> <li>% Increase in Frequency of Service</li> </ul>
<b>“Make our infrastructure last longer”</b>	<ul style="list-style-type: none"> <li>Department Infrastructure Health</li> </ul>	<ul style="list-style-type: none"> <li>Statewide Level of Service Scores for Facilities (assets)</li> <li>% Increase in value of Department infrastructure</li> </ul>
<b>“Make our organization a place that works well”</b>	<ul style="list-style-type: none"> <li>Project/Program Delivery on Schedule and Budget</li> <li>Business Development &amp; Outreach</li> <li>Customer Service</li> <li>Fiscal Management</li> </ul>	<ul style="list-style-type: none"> <li>% of projects and programs administered, managed and constructed on schedule and on budget (Planned vs. Actual)</li> <li>% of solicitations sent to, % of bids received from, &amp; % of contract dollars awarded to DBEs, MBEs, WBEs, SBEs, and HUBs</li> <li>Customer survey scores (public, partners, etc.)</li> <li>% improvement of existing overhead and program budget</li> </ul>
<b>“Make our organization a great place to work”</b>	<ul style="list-style-type: none"> <li>Employee Safety</li> <li>Employee Satisfaction</li> <li>Recruiting, developing and retaining employees</li> </ul>	<ul style="list-style-type: none"> <li>Number of incidents, lost work days, worker's comp claims</li> <li>Employee satisfaction survey composite score</li> <li>Retention rate of “Top Performers” and/or stabilization rate</li> </ul>

# “DRAFT” Metrics – Secretary of Transportation

## GUIDE FOR DASHBOARD SCORECARD

FOR USE IN PERFORMANCE REVIEW MEETINGS

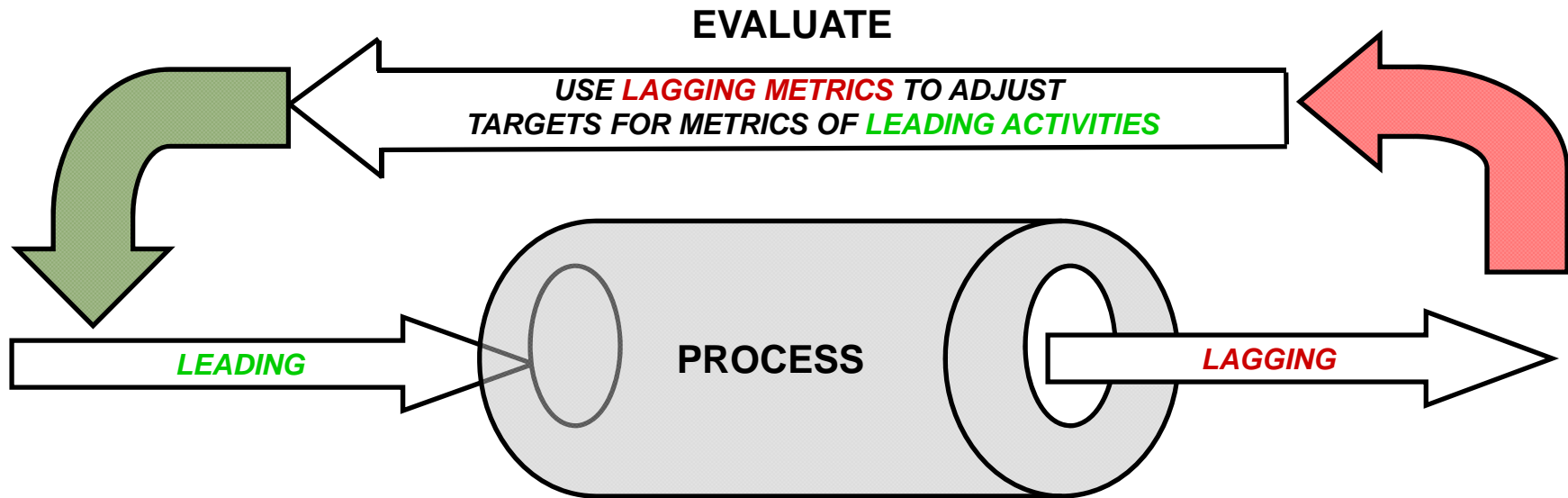
	Metric	Metric Data	Target	Data Source	Wt (%)
<b>Safer</b>	Fatalities	<i>Fatalities per 100 million vehicle miles; i.e. 1.58...this will be compared against a baseline TBD (% improvement)</i>	1.50-1.63	<i>Traffic Engineering Branch</i>	10
<b>Efficiently</b>	Reliability of Strategic Highway Corridor System	<i>-Average operating speeds on Strategic Highway Corridors (SHC) -Travel time reliability -Congestion (Level of Service)</i>		<i>Transportation Planning Branch</i>	
	Transit Service	<i>% Increase in Frequency of Service compared to previous year for Rail, Ferry, Public Transit, etc.</i>	70-89%	<i>Transit</i>	5
<b>Last Longer</b>	Department Infrastructure Health	<i>- Composite Statewide Rating (Level of Service Rating) - % annual increase in value of Department infrastructure</i>	C-toC	<i>- Asset Management-Maintenance Condition Reports - Financial Management Division</i>	25
<b>Works Well</b>	Projects/Programs/Services on Schedule and on Budget	<i># of projects/programs/services planned for year divided by # actual completed = % success rate</i>	70-89%	<i>Program Development report from STaRS and/or BW, HiCAMS</i>	25
	Business Development and Outreach	<i>% Contract dollars awarded to DBEs, MBEs, WBEs, SBEs, &amp; HUBs</i>	70-89%	<i>SAP</i>	10
	Customer Service	<i>Customer survey scores (public, partners, etc.)</i>	70-89%	<i>TBD</i>	5
	Fiscal Management	<i>% improvement of administrative budget(s)</i>	90-95%	<i>TBD</i>	10
<b>Great Place to Work</b>	Employee Safety	<i># of reported incidents that cause lost work days and/or worker's comp claims compared to baseline, i.e previous year(s) reported incidents</i>	6.1-7	<i>Safety and Loss Control</i>	10
	Employee Satisfaction	<i>TBD</i>		<i>Employee Survey</i>	
	Recruiting, developing and retaining employees	<i>Retention rate of "Top Performers" and/or stabilization rate</i>		<i>TBD</i>	

WORKING DRAFT 10/25/07; 12/7/07

# Metrics: Leading vs. Lagging

<b>LEADING INDICATORS</b> <i>(Input)</i>	<b>LAGGING INDICATORS</b> <i>(Outcomes)</i>
<p><b>Leading</b> Indicators are metrics that are task specific</p> <p><b>Leading</b> Indicators measure and track performance before a problem arises</p> <p><b>Leading</b> Indicators are <u>proactive</u></p> <p><b>Leading</b> Indicators indicate what may happen (future)</p> <p><b>Leading</b> Indicators are a predictor to the ability to meet future goals</p>	<p><b>Lagging</b> Indicators are <u>reactive</u></p> <p><b>Lagging</b> Indicators are reflective and measure performance against prior goals</p> <p><b>Lagging</b> Indicators indicate what has already happened (past)</p>

# Metrics: LEADING vs. LAGGING Process

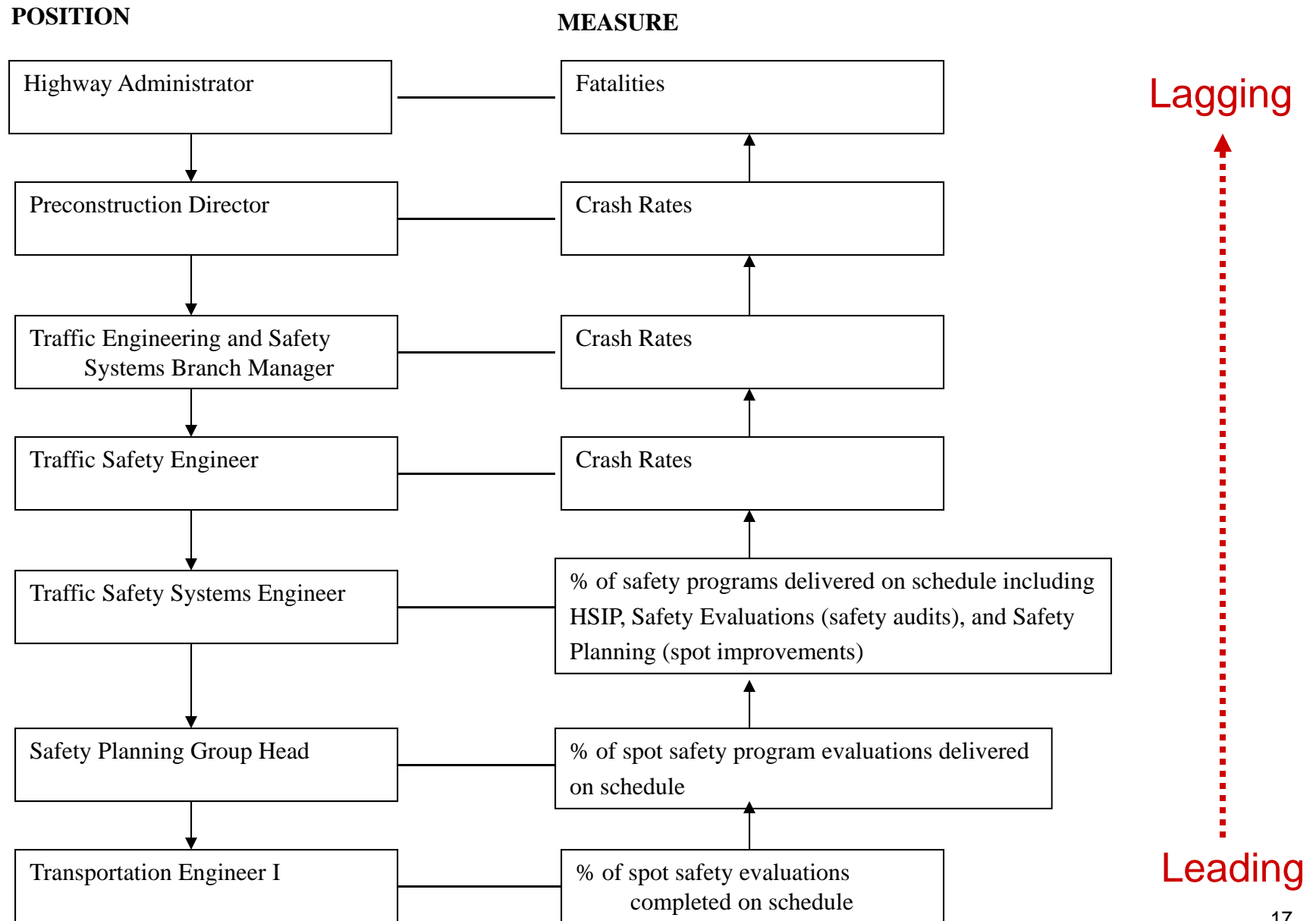


CRASH RATE

- IMPROVING SHOULDER DROP-OFFS
- ADDING REFLECTIVE MARKERS
- TURN LANE ADDITIONS
- LEGALLY LICENSED DRIVERS
- REDUCTION OF VMT BY USE OF ALTERNATIVE MODES
- TIMELY PROJECT DELIVERY



# Example Cascading Metrics for SAFER



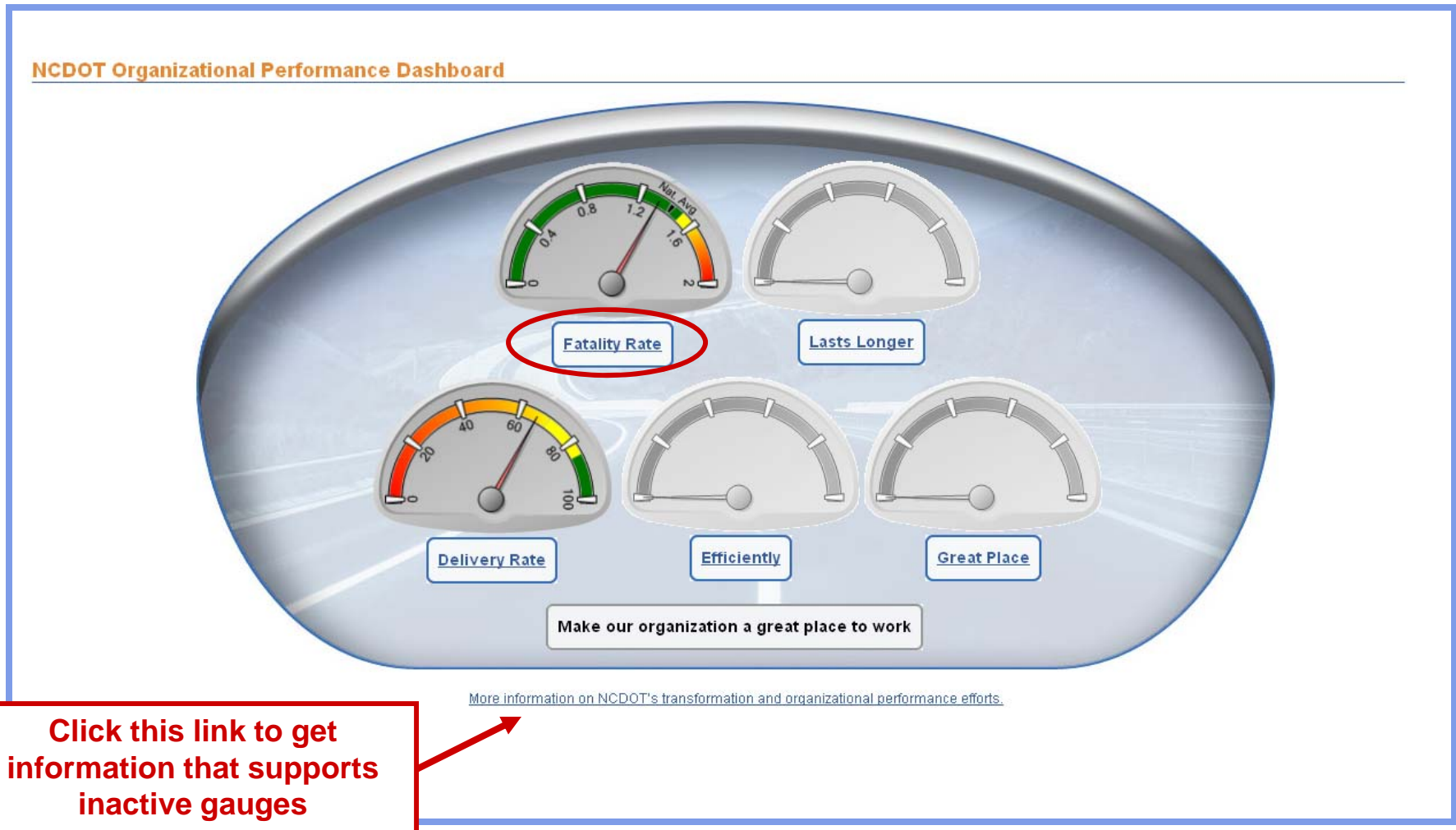
# Access NCDOT Performance Dashboard

<http://www.ncdot.org/>

The screenshot shows the NCDOT website interface. At the top left is the NCDOT logo with the text "North Carolina Department of Transportation". To the right are navigation links: "About | Careers | Contact | News | Search: NCDOT". Below the header is a banner for "NCDOT Crew Experiences Tornado - Click Here for Photos". A central feature is the "NCDOT Organizational Performance Dashboard" with the tagline "Connecting people and places in North Carolina." To the left of this banner is a vertical menu with links: "Doing Business with NCDOT", "Maps & Publications", "Programs", "Projects & Studies", and "Travel Information". A red callout box with the text "Click this icon to access the NCDOT Dashboard" has an arrow pointing to a small "NCDOT DASHBOARD" icon in the "What's New" section. Below the banner are five columns of content: "What's New" (with the dashboard icon), "Divisions" (listing Aviation, Bicycle & Pedestrian, DMV, Ferry, Highways, Public Transportation, Rail), "Business Resources" (listing Approved Product List, Directory of Trans. Firms, Electronic Forms, Project Letting, Order Plans, Order Publications), "Commuters & Travelers" (listing Construction Projects, Driver License, HOV Lanes, Road Conditions, Traffic Cameras), and "Find Info Near You" (with a map of North Carolina and a "Select-A-County" dropdown). The footer contains "© Copyright NCDOT 2008" and "NCDOT Home | NC.gov".

# NCDOT Performance Dashboard - Ultimate

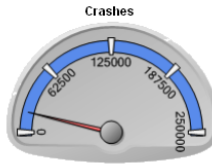
## *Visual Representation of Overall Health of an Organization*



# “Make Our Transportation Network Safer”

Programs > NCDOT Dashboard >  
**Crash Details Statewide**

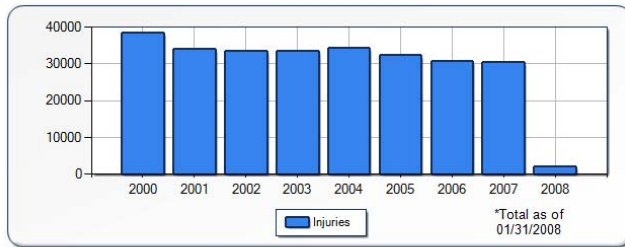
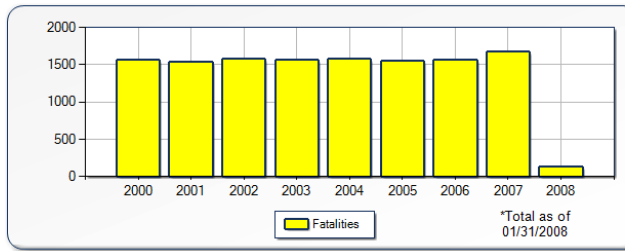
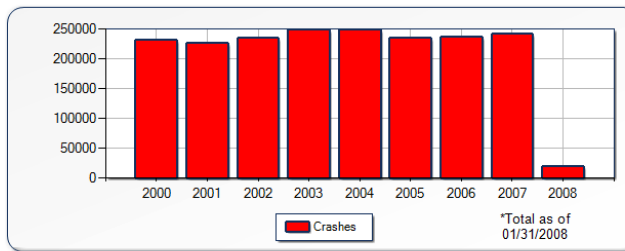
Filter By:  
 Statewide



Total as of 01/31/2008



Total as of 01/31/2008



## Yearly Statistics

	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>Crashes</b>	231647	225607	234478	248564	249155	234816	236326	241414	18790
<b>Fatalities</b>	1561	1533	1577	1561	1578	1550	1555	1668	120
<b>Injuries</b>	38464	34070	33424	33337	34213	32192	30766	30297	2022
<b>VMT (100MVM)<sub>1</sub></b>	892.46	915.71	936.86	937.63	956.27	1008.61	1016.48	1047.99	90.04
<b>Crash Rate</b>	259.56	246.37	250.28	265.1	260.55	232.81	232.49	230.36	208.69
<b>Fatality Rate</b>	1.75	1.67	1.68	1.66	1.65	1.54	1.53	1.59	1.33
<b>Injury Rate</b>	43.1	37.21	35.68	35.55	35.78	31.92	30.27	28.91	22.46

1: VMT=Vehicle Miles Traveled, MVM=Million Vehicle Miles.  
 \* Total Year to Date

Data current as of: 01/31/2008

More information on [how we get these numbers.](#)

Click this link to learn how we got these numbers

# NCDOT Performance Dashboard - Interim

## NCDOT Organizational Performance Dashboard



### Highlights:

- Check back for updates to this website. The next phase includes a series of Dashboards that report the DOT's performance in meeting our goals.
- For questions / comments regarding the NCDOT Dashboard please [Contact Us](#).

- [News & Updates](#)
- [McKinsey & Company Report](#)
- [Mission & Goals](#)
- [Values](#)

### + News & Updates:

### + McKinsey & Company Report:

### - Mission & Goals:

#### Mission:

*Connecting people and places in North Carolina - safely and efficiently, with accountability and environmental sensitivity.*

#### Goals:

- **Make our transportation network safer**
  - ▢ [5 Year Crash Fatality Statistics](#)
  - ▢ [Fatality Information \(Crash Report\)](#)
- **Make our transportation network move people and goods more efficiently**
  - ▢ [Congestion Areas](#)
  - [Strategic Highway Corridors](#)
  - [Travel Information \(TIMS\)](#)
- **Make our infrastructure last longer**
  - ▢ [Executive Summary Report, 2006](#)
  - [Full Maintenance Condition Report](#)
- **Make our organization a place that works well**
  - [Continuous Process Improvement Program \(CPI\)](#)
  - [Construction Progress Report](#)
  - ▢ [Money Spent on Construction Projects, 2007](#)
- **Make our organization a great place to work**
  - [Current Job Postings](#)
  - [Employee Newsletter, In the Loop](#)
  - [Office of State Personnel Employee Compensation Calculator](#)

## Improved Human Management

# Initiative 5



*Developing our employees by having the right people with the right set of skills in the right jobs at the right time to accomplish our mission...*

# Performance Dashboard Appraisal - Section A

## Section A. Performance Metrics

Performance Cycle Date:			
Name:		Unit/Section:	
Classification/Title:		Supervisor's Name:	

**NCDOT Goals:** (1) Make our transportation network **safer**. (2) Make our transportation network move people and goods **more efficiently**. (3) Make our infrastructure **last longer**. (4) Make our organization a place that **works well**. (5) Make our organization a **great place** to work.

Enter NCDOT Goal (1-5 above)	Performance Metrics (Results Expectations)			Progress Reviews			Year End		
	Measure	Target	% Weight	Review Date: _____	Review Date: _____	Review Date: _____	Actual Results	Number Rating *1, 2, 3	Weighted Rating % Weight x No. Rating
1	Crash Rates	238-230	5						
2	Reliability of Strategic Highway Corridor and Regional Tier Routes	TBD	0						
3	Division Infrastructure Health	C- to C	40						
4	Projects/Programs/Services on Schedule and on Budget	70-89%	40						
4	Customer Service	70-89%	5						
4	Fiscal Management	90-95%	5						
5	Employee Safety	6.1-7	5						
5	Employee Satisfaction	TBD	0						
5	Retaining, Developing, and Retaining Employees	TBD	0						
<b>Total % must = 100</b>			<b>100%</b>	<b>Combined Weighted Rating =</b>					
				<b>Sum of % weights that received a number rating of "1" at year end</b>					

- \*Number Rating Key:**
- 1 = Does not meet expectations
  - 2 = Meets expectations
  - 3 = Exceeds expectations

**Beginning of performance cycle: Signatures indicate supervisor and employee have discussed performance metrics, NCDOT values and leadership competencies.**

Supervisor's signature:		Title:		Date:	
Employee's signature:		Date:			

# Performance Dashboard Appraisal - Section B

## Section B. NCDOT Values

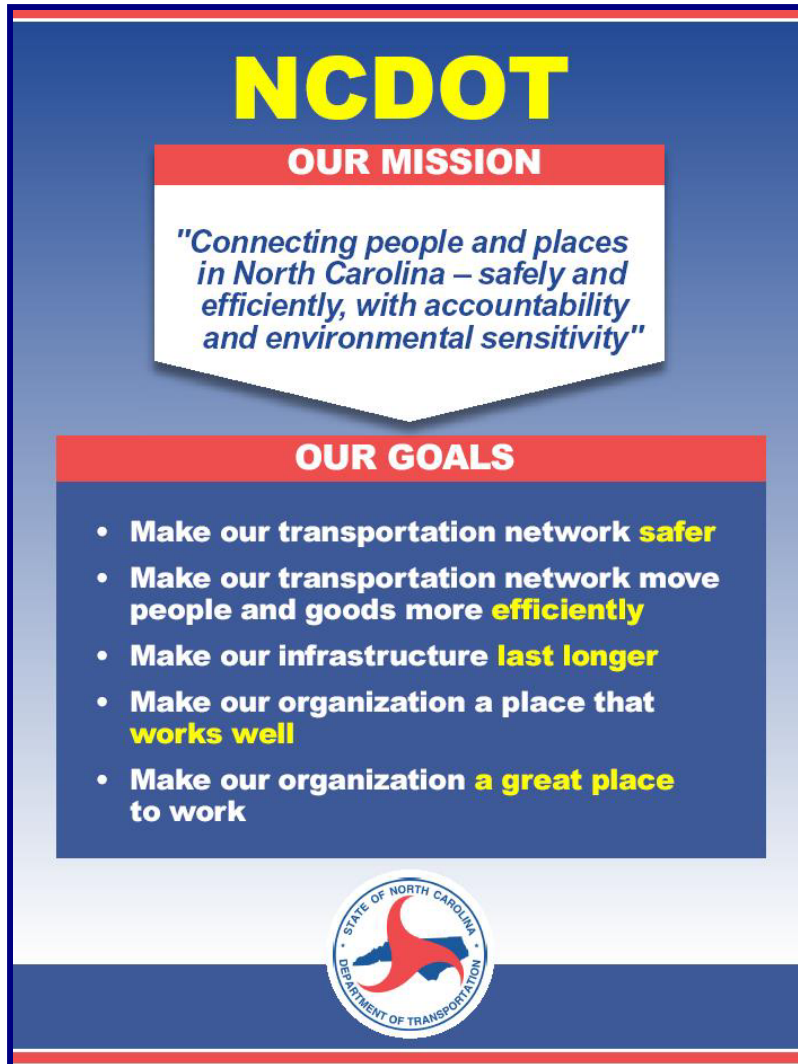
**Supervisor's Instructions:**

At the end of the performance cycle, check "YES" or "NO" as to whether the employee adhered to each value during the performance cycle. If "NO" is checked, a description of the non-adherence must be provided in the "Comments" column.

Values (Behavioral Expectations)	Adhered to Value?		Supervisor's Comments
	YES	NO	
<p><b>Safety:</b> We strive for safety throughout our transportation networks as well as in our work and our daily lives.</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p><b>Customer Service:</b> We respond to our customers, both internal and external, in an open, professional and timely manner.</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p><b>Integrity:</b> We earn and maintain trust by responsibly managing the state's assets, acting ethically, and holding ourselves accountable for our actions.</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p><b>Diversity:</b> We draw strength from our differences and work together in a spirit of teamwork and mutual respect.</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p><b>Quality:</b> We pursue excellence in delivering our projects, programs, services and initiatives.</p>	<input type="checkbox"/>	<input type="checkbox"/>	



# It all comes back to....




**NCDOT**

**OUR MISSION**

*"Connecting people and places in North Carolina – safely and efficiently, with accountability and environmental sensitivity"*

**OUR GOALS**

- Make our transportation network **safer**
- Make our transportation network move people and goods more **efficiently**
- Make our infrastructure **last longer**
- Make our organization a place that **works well**
- Make our organization **a great place to work**



- Working together for a common purpose
- Planning and prioritizing our work
- Delivering our projects & programs effectively
- Measuring our performance
- Developing our employees

Fulfilling our role of  
“Connecting People and Places in North Carolina”