



VDOT's Dashboard

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Dashboard Manager, Performance and Strategic Planning Team

March 15, 2013

Overview

- **Goals of the Dashboard**
- **Background**
- **The Dashboard**
- **Lessons Learned**
- **Beyond On-Time and On-Budget**
- **Next Steps**

Goals of the Dashboard

- Increase accountability and performance
- Provide a platform to measure, monitor, evaluate and report performance
- Establish clear business rules
- Increase public transparency

Background

Public Perception Of VDOT - 2002

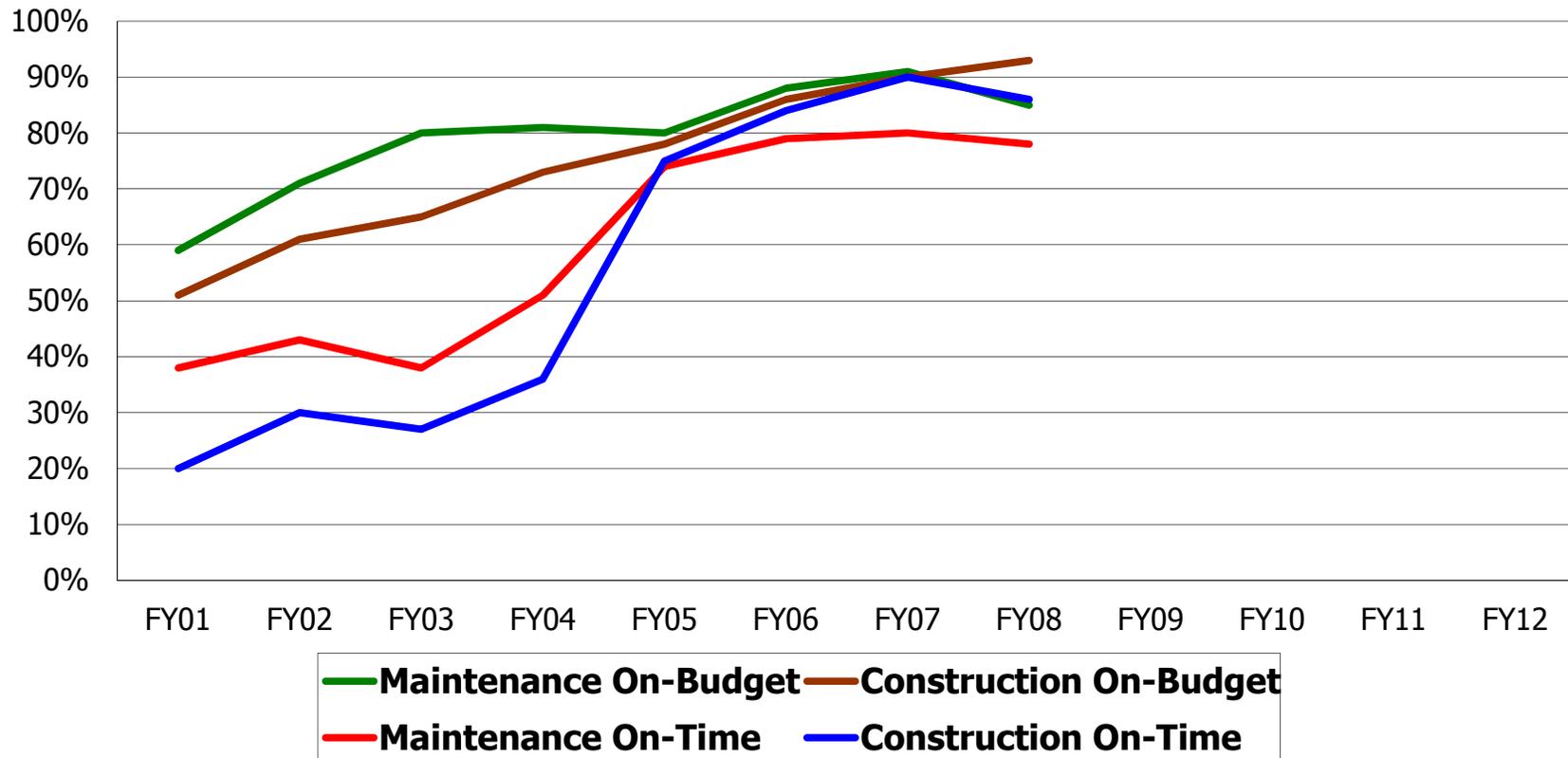
- Confused lines of responsibility and accountability
- Needed “a room full of people” to assess project status
- Prevailing refrains:
 - *“It costs what it costs”*
 - *“It’ll be done when it’s done”*
- Public perception was of poor management and promises not kept
 - ***“VDOT is in shambles with little credibility left either inside or outside the agency.”*** (Washington Post; April 10, 2002)

Strategies for Sustaining Success

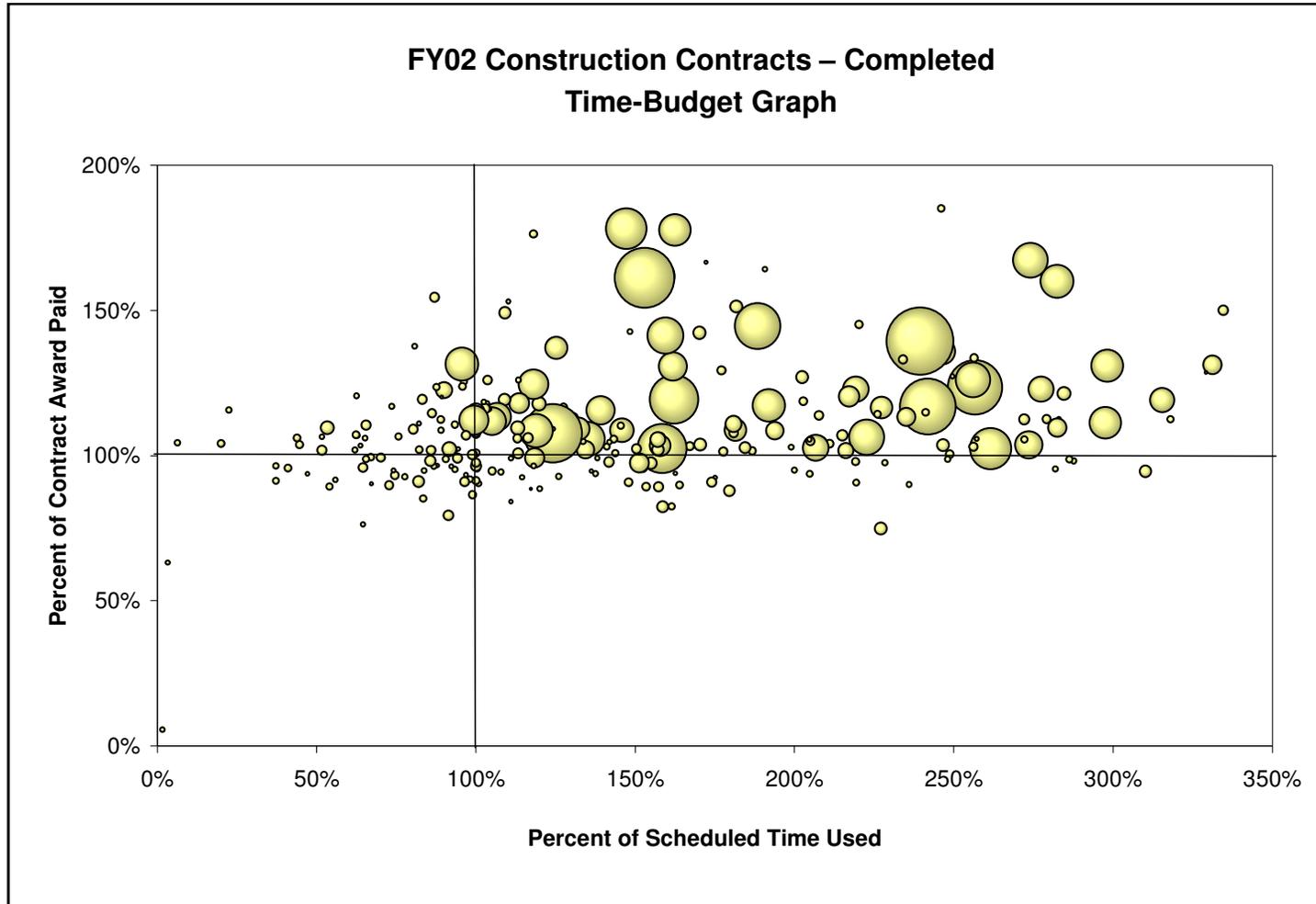
- Operate in the open
...let the public in, create public trust
- Measure and communicate performance
- Manage expectations through target setting
...then it's hard to go back
- Change the culture
... to be sensitive to public needs

Step 1: Improve Core Development and Delivery Performance

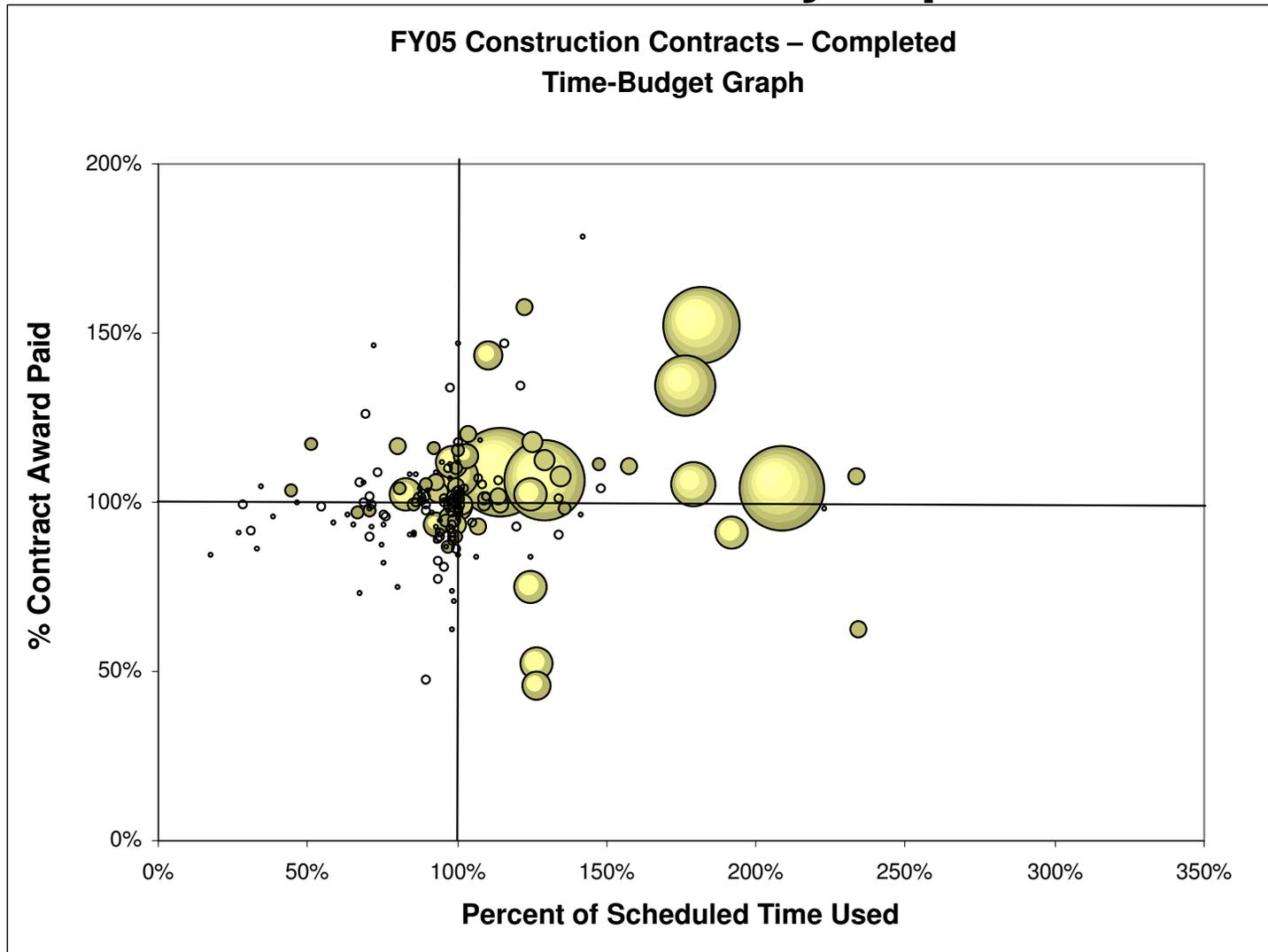
VDOT On-Budget and On-Time Performance



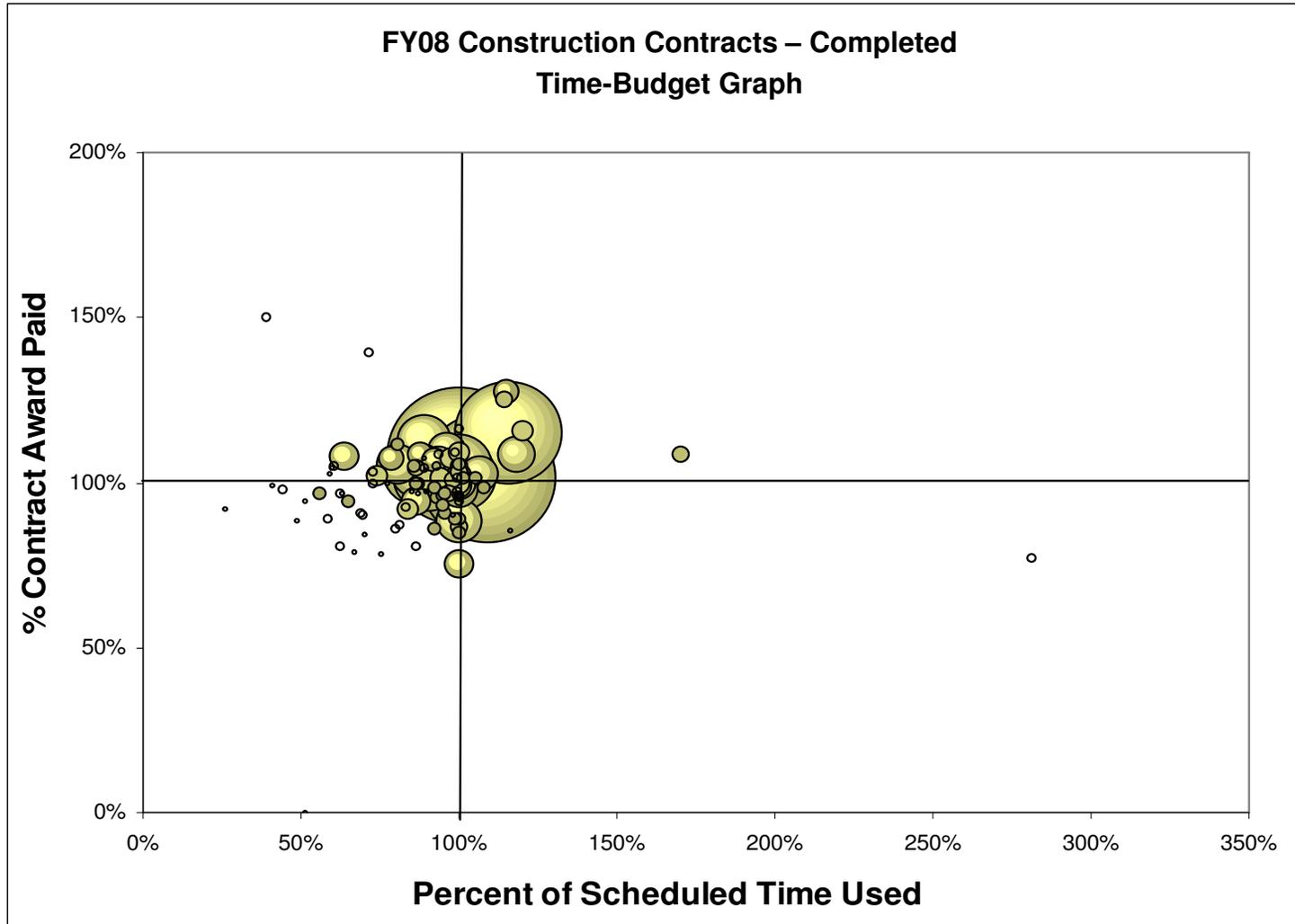
FY02 Annual On-Time and On-Budget Construction Delivery Improvement



FY05 Annual On-Time and On-Budget Construction Delivery Improvement



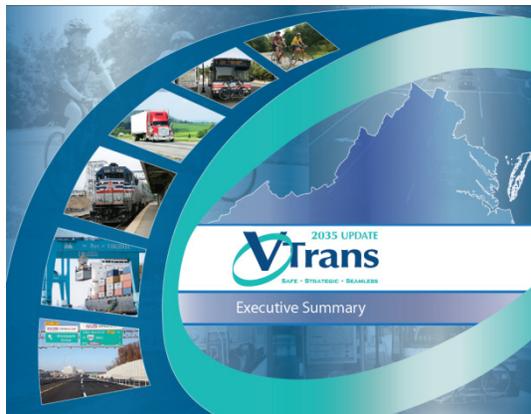
FY08 Annual On-Time and On-Budget Construction Delivery Improvement



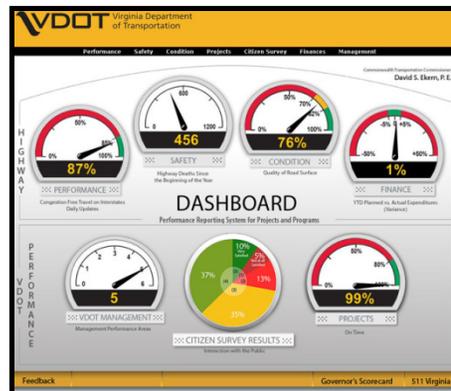
Step 2: Enhanced Public Access to Planning Information and Performance Results

VDOT began reporting periodic performance to the public, Governor and the Secretary of Transportation in four ways...

VTRANS2035



VDOT Dashboard



VDOT Quarterly Report Card

COMMISSIONER'S MESSAGE

The Virginia Department of Transportation (VDOT) continued its path to renewed excellence with a third straight quarter of exceeding its targets for completing construction and maintenance contracts both on time and on budget.

The agency will be able to fund more projects as the Commonwealth Transportation Board (CTB) approved an \$11.4 billion Six-Year Improvement Plan, \$800 million more than last year's program. The new program provides \$9 billion for roads, highways, bridges and debt service, with the remainder going to rail, transit and other improvements. Most of this year's increase came from public and private-sector contributions for the Interstate 95 Express Lanes project, which recently broke ground in Northern Virginia.

Additionally, \$160 million in financing from the Virginia Transportation Infrastructure Bank will help advance a critical link of the Gloucester Parkway in Loudoun County and support the U.S. 460 corridor improvements linking the Port of Virginia to Interstate 95 and beyond to proceed. When completed, these projects will reduce congestion and improve driver safety.

Greg Whirley
Commissioner

Statewide Construction Quality Compliance

YTD Construction CQIP Rating	4Q FY 2011	4Q FY 2012
92.1%	91.4%	

CONTRACTS COMPLETED BOTH ON TIME AND WITHIN BUDGET

4Q FY 2011	4Q FY 2012
66%	78%

SCHEDULED CONTRACTS COMPLETED ON TIME

CONSTRUCTION ON-TIME PERFORMANCE	MAINTENANCE ON-TIME PERFORMANCE								
<table border="1"> <thead> <tr> <th>4Q FY 2011</th> <th>4Q FY 2012</th> </tr> </thead> <tbody> <tr> <td>71%</td> <td>86%</td> </tr> </tbody> </table>	4Q FY 2011	4Q FY 2012	71%	86%	<table border="1"> <thead> <tr> <th>4Q FY 2011</th> <th>4Q FY 2012</th> </tr> </thead> <tbody> <tr> <td>66%</td> <td>80%</td> </tr> </tbody> </table>	4Q FY 2011	4Q FY 2012	66%	80%
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Virginia Performs

<http://www.vaperforms.virginia.gov/agencylevel/stratplan/publicindex.cfm>

State Agency Planning & Performance Measures

How does Virginia plan and measure the performance of state agencies?

Virginia state government agencies develop and implement **Strategic and Service Area Plans** to support achievement of their long-term objectives and fulfill their missions and mandates.

Agencies measure their performance in two ways: **Agency Performance Measures** (program measures) and the **Management Scorecard** (administrative measures).

As part of its commitment to transparency in government, details on these plans and measures are available online through Virginia Performs. Learn what objectives each state agency has set and view how agencies are measuring progress against those objectives. Learn also how state agencies are measuring up on key management criteria. Explore the data for yourself. Discover why Virginia has earned the title of best-managed state in America.

Performance Improvements and Enhanced Communications Improved Public Perception Of VDOT

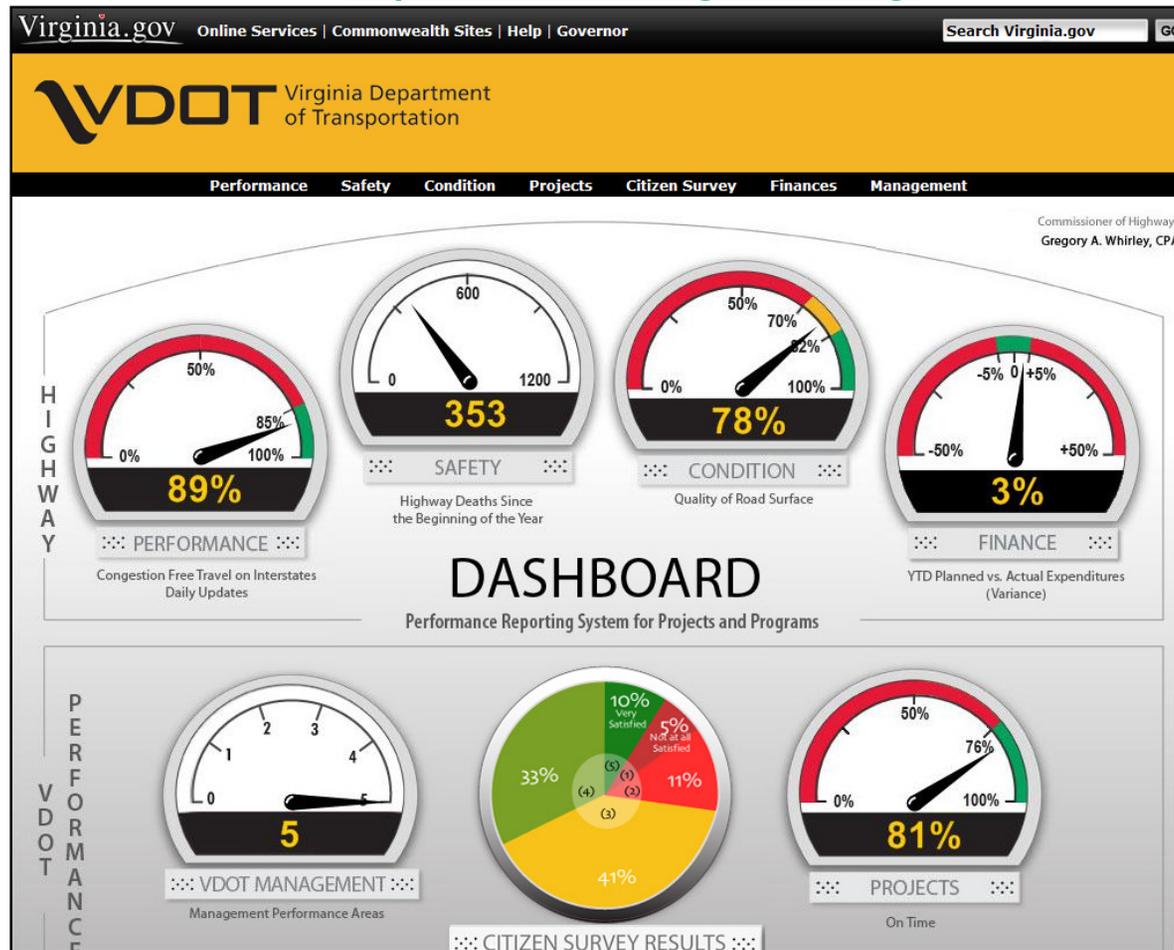
- *“With a smaller but abler workforce and with solid managers, the agency that used to promise projects it could not afford has improved its score ... VDOT is up to the job.”*
(Washington Post; June 5, 2005)
- *“... continues to improve the performance of an agency that long has resisted attempts at reform...”*
(Richmond Times Dispatch; July 18, 2004)
- *“Many drivers, frustrated by mounting traffic and construction delays ... never got the message that VDOT has become a more trustworthy organization. But it has.”*
(Virginian Pilot; June 3, 2005)

The Dashboard

VDOT Dashboard Homepage

A majority of publicly reported performance measures may be found within the Dashboard

<http://dashboard.virginiadot.org/>



Dashboard 3.0 Architecture

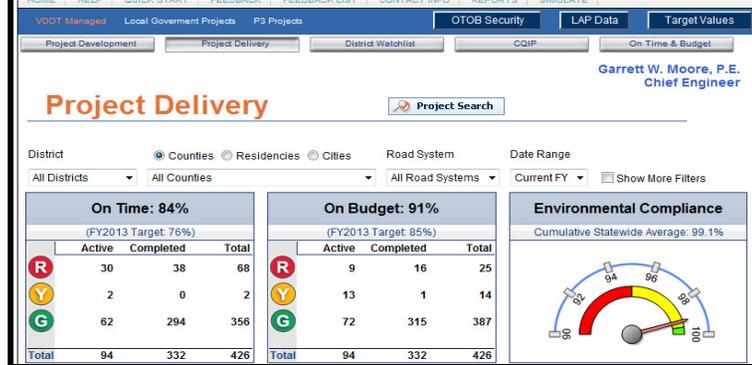
Project Delivery Example



Level 0 shows current On-Time status of all Construction and Maintenance contracts

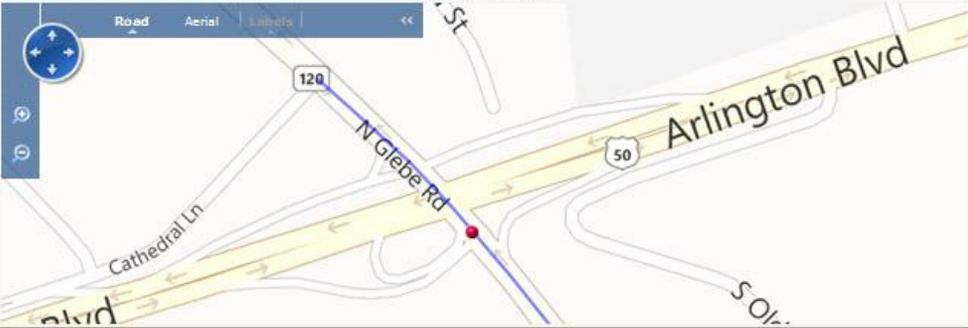
Drilling down to Level 1 allows the viewer to find information on on-time and on-budget performance by Fiscal Year, District, and Funding Source (CN or MN)

Going further down to Level 2 allows the viewer to see & search contract-level performance and information

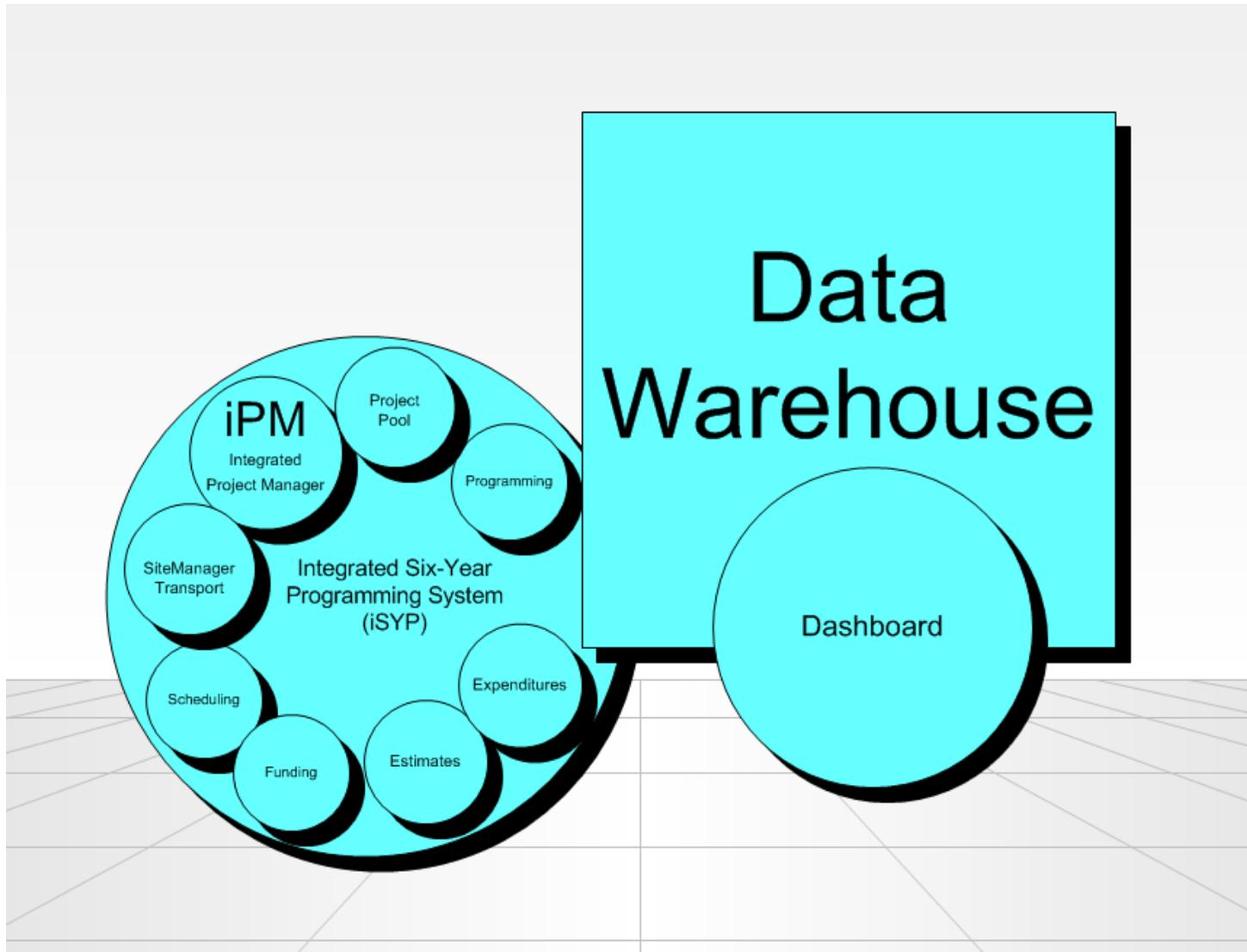


Contract ID	Description	Original Award Amount	Cost of Work		Current Contract Amount	On Time	On Budget
			Current	Final			
AM906PMJ79730	PLANT MIX AND PAVEMENT MARKINGS (Fairfax, **) (PM06-96A-156,M400)	\$2,791,742	Completed	\$2,526,056	\$2,791,742	G	G
AM906PMM79732	PLANT MIX AND PAVEMENT MARKINGS (Fairfax, Arlington) ((NFO)PM06-000-158,M400)	\$1,295,983	Completed	\$1,430,474	\$1,295,983	G	R
CM906PMK79731	PLANT MIX AND PAVEMENT MARKINGS (Fairfax, Fairfax) (PM06-029-157,M400)	\$4,099,079	Completed	\$4,356,524	\$4,100,564	G	G
CM907PR939673	PAVEMENT REHABILITATION (**, **) (PR-9A-07)	\$818,662	Completed	\$788,086	\$818,662	G	G
B00003790C02	3.42 MI. GRADE, DRAIN, ASP. PAVE., SIGNALS, SIGNALS, (Manassas, Prince William)	\$20,736,199	Completed	\$20,705,074	\$22,841,333	G	G

Level 3: Project Detail Level

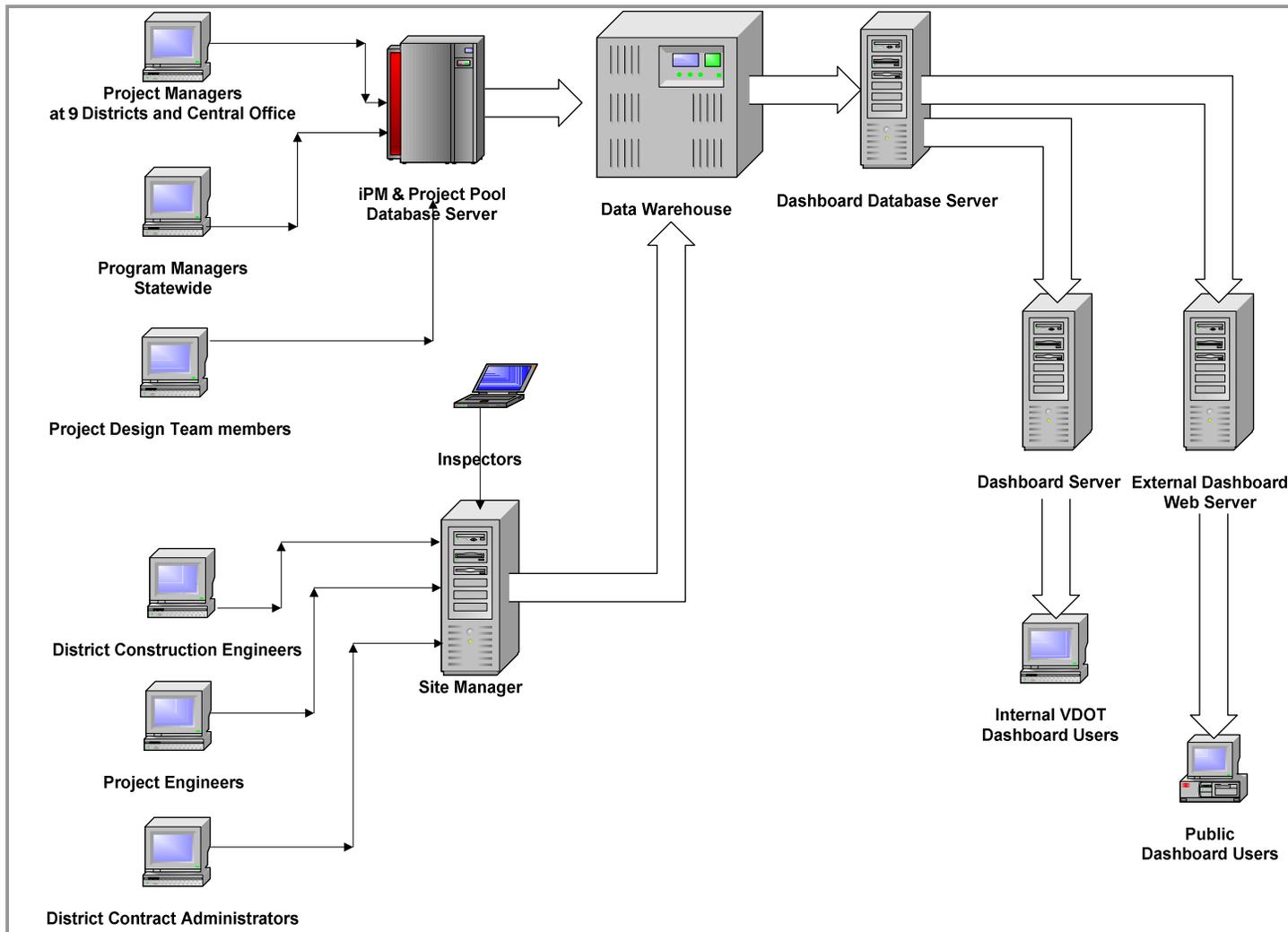
Construction Dashboard Project Details					
UPC	18860	Contract Id:	A00018860C01	State Project #	(NFO)0120-000-118.C501
Summary					
Description	BRIDGE DECK REPLACEMENT AND WIDENING AT GLEBE ROAD (Fairfax, Arlington County) ((NFO)0120-000-118.C501)				
District	Northern Virginia	Residency	FAIRFAX		
County	ARLINGTON	City/Town			
Road System	Primary (Arterial)	Route	0120		
Contract Type	CONSTRUCTION/MAINTENANCE HYBRID RAAP (CMMR)		Type of Work	BRIDGE WIDENING	
Comments					
Contact Information					
VDOT Contact	Charles Harvey		Phone	(703) 259-3234	
Construction Company	FORT MYER CONSTRUCTION CORPORATION				
Budget			Schedule		
Award	\$4,897,792		Contract Execution Date *	April 21, 2011	
Cost of Work To Date	\$4,653,127		Original Specified Completion Date	October 14, 2012	
Un-audited Final Cost			Current Estimated Completion Date	October 14, 2012	
Current Contract Amount	\$5,282,569		Current Specified Completion Date	October 14, 2012	
	7.8% OVER ORIGINAL CONTRACT AWARD AMOUNT		Acceptance Date		
			% Work Completed	88 %	
			% Original Time Spent	95 %	
			Days Charged To Date	518 days	
			Original # Days Allowed	543 days	
			Type of Schedule Days	Fixed Date	
			* Actual work on this project may begin at any time after contract execution		
				TODAY <= PROJECTED COMPLETION DATE AND PROJECTED COMPLETION DATE <= ORIGINAL COMPLETION DATE	
Map Information					
					

VDOT Dashboard Architecture



VDOT Dashboard Architecture

Data Flow and Process



Lessons Learned

Lessons Learned

- Choose Measures that...
 - Are outcome oriented and support key decision making
 - Promote openness, honesty, transparency
 - Demonstrate good stewardship of the public's funds
- Keep it Simple – the public should be able to grasp the concept easily
- The most valuable measures are often the hardest to get
 - Best information often comes from combining data from various systems and developing 'actionable intelligence'
- In addition to outcome measures – include leading indicators that are predictors of performance

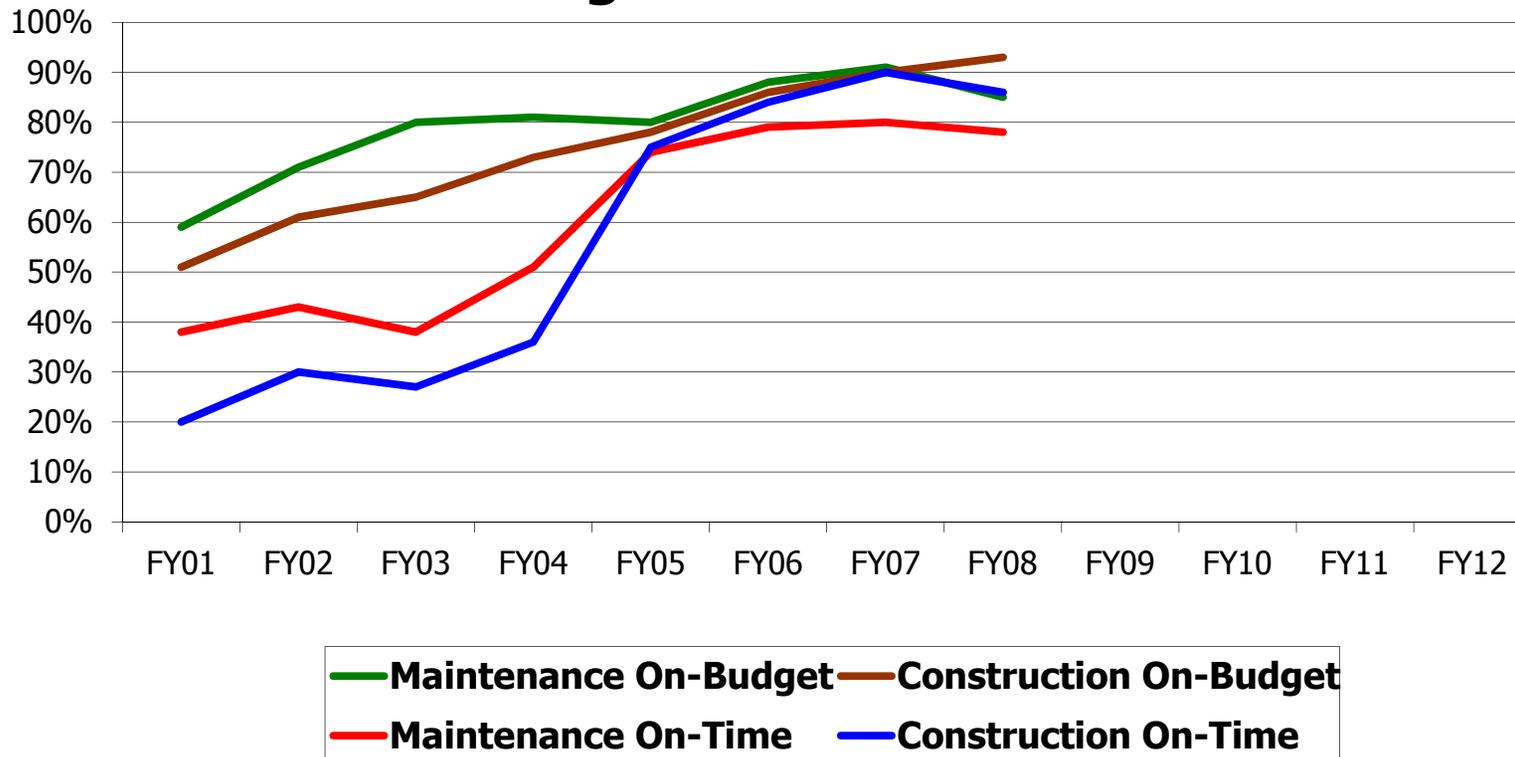
Lessons Learned

- “Cascade” performance metrics through the organization
 - Everyone has a role to play – measurement helps clarify those roles
- Aim for Continuous Improvement: Plan – Do – Check – Act
 - The easier it is to “Check,” the more improvements you’ll be able to make
- Keep your eye on the ball...

Lessons Learned...

“Keep your eye on the ball”

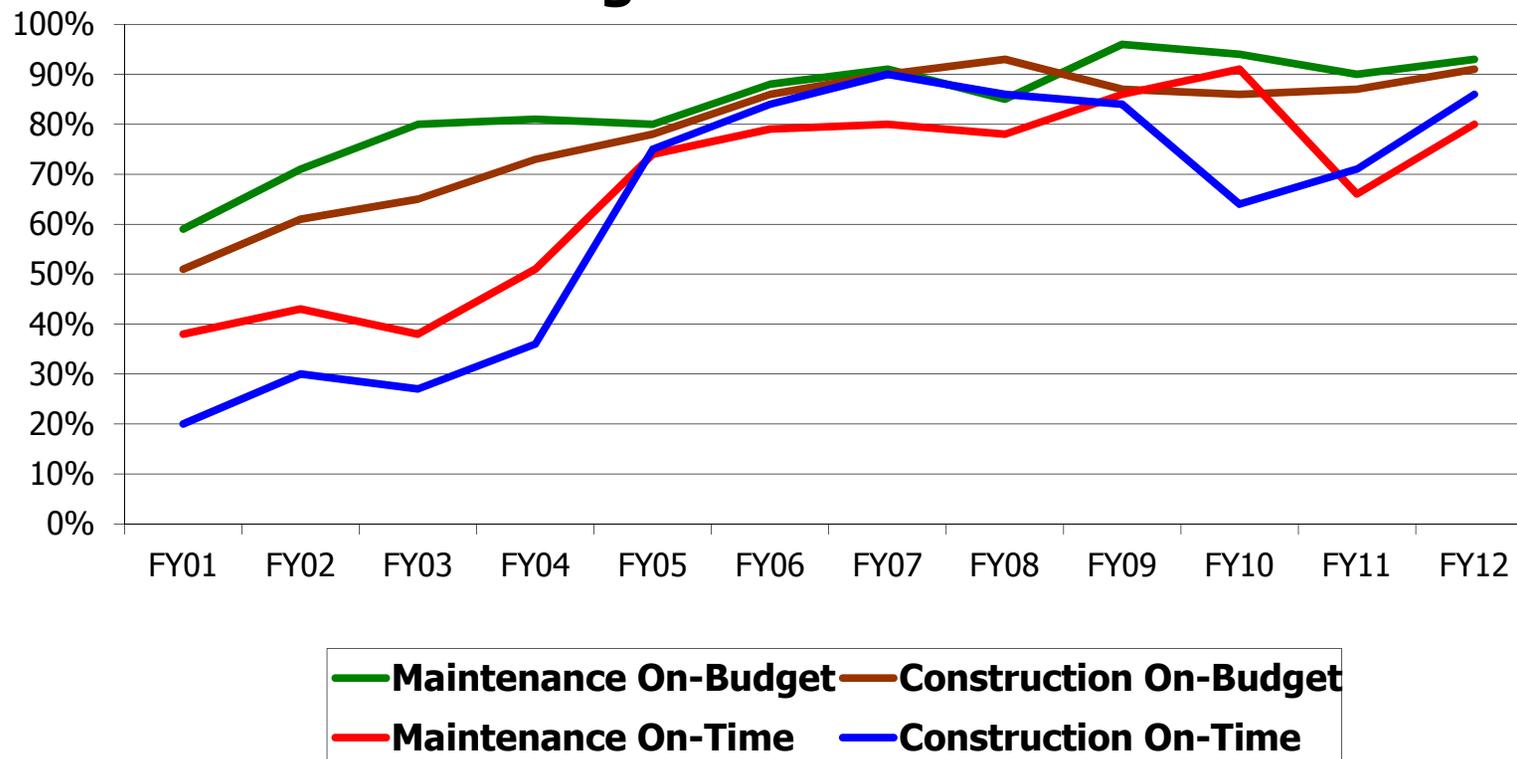
VDOT On-Budget and On-Time Performance



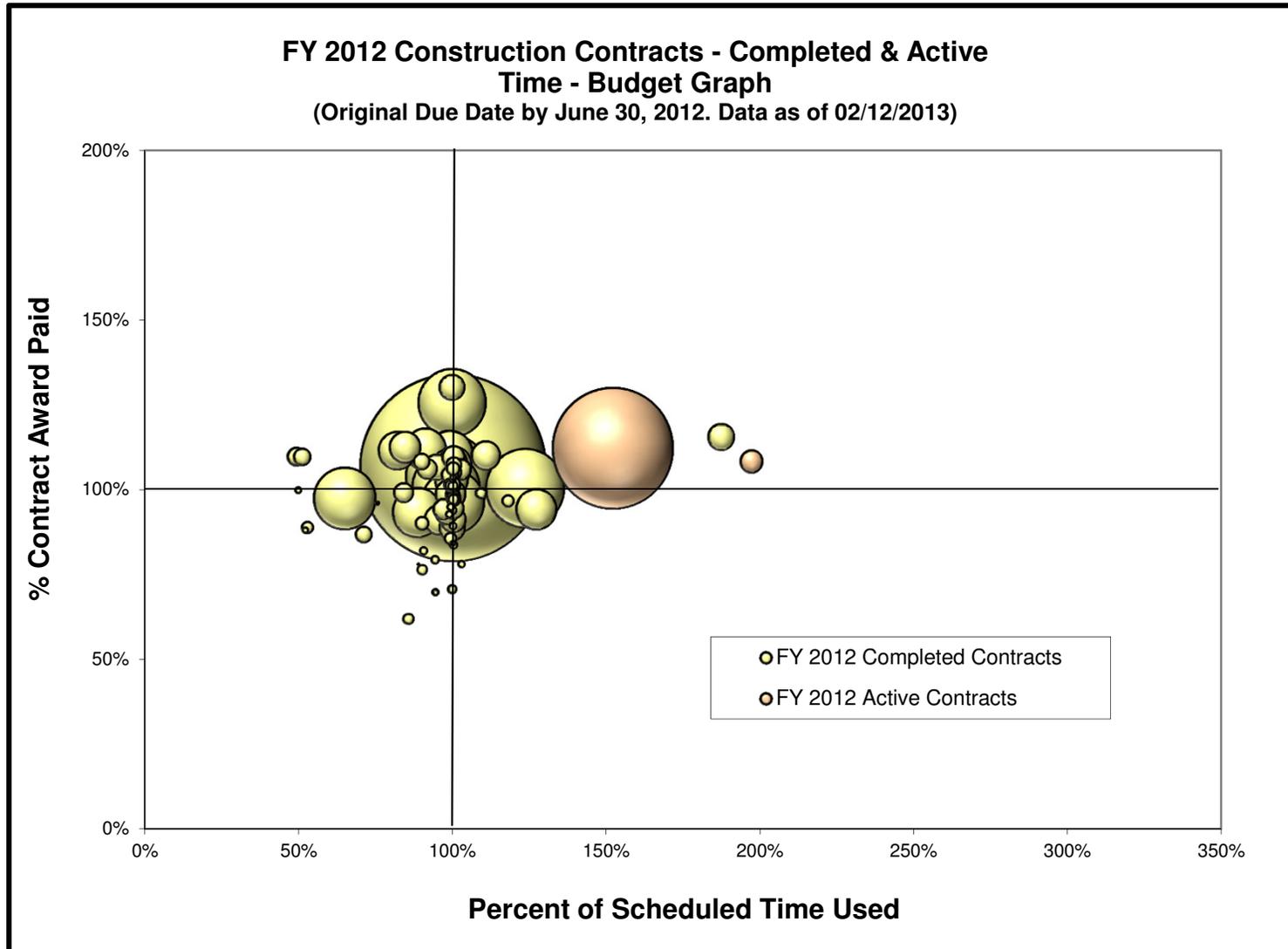
Lessons Learned...

“Keep your eye on the ball”

VDOT On-Budget and On-Time Performance

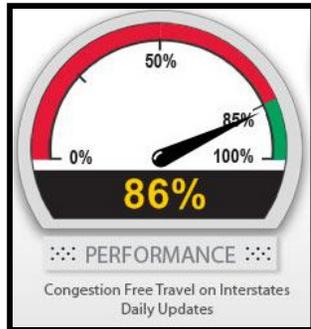


FY12 Annual On-Time and On-Budget Construction Delivery Improvement



Beyond On-Time and On-Budget

Step 3: Developing Operational Measures Beyond On-Time and On-Budget



System Performance

<u>Measure</u>	<u>Target</u>	<u>FY12 Result</u>
▪ Congestion Free Travel on Interstates	87%	89%
▪ Annual Hours of Delay Reported by Texas Transportation Institute (TTI) Target = Maintain at 2003 level		
○ Northern Virginia	73	67
○ Virginia Beach metro	53	43
○ Richmond metro	22	29
Results are TTI 2012 reporting of CY2011 data		
▪ Percent of Incidents taking more than 30 minutes to clear	5% reduction by July 2013	

Utilizing Operational Measures Beyond On-Time and On-Budget...



Safety

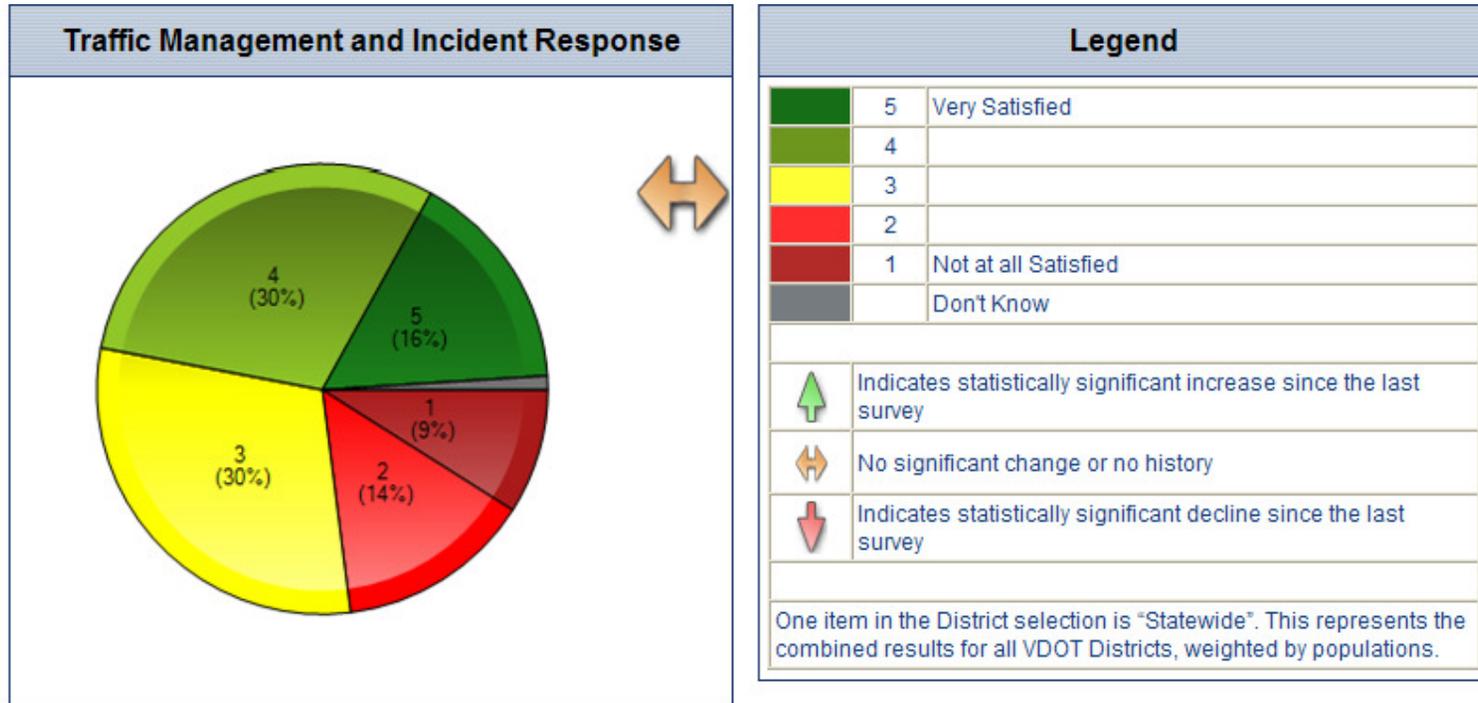
Measure	Target	CY11 Result
•Traffic crash injuries	<72,023	63,382
•Traffic crash deaths	<674	764

Results are from DMV for CY2011
Targets per historical Highway Safety Plan

Strategic discussion example: Statewide CY2011 traffic crashes increased 3.5% and crash related injuries grew 3.2%, while deaths increased by almost 3.2% from CY2010 levels. VDOT and its partners (State Police, DMV) continue to communicate and educate the public in safe driving practices. To date in CY2012 crashes, injuries and deaths continue to trend slightly up from CY2011 levels.

Step 4: Utilizing Satisfaction Measures

Traffic Management and Incident Response



- 5. Very Satisfied = 16%
- 4. 30%
- 3. 30%
- 2. 14%
- 1. Not at all Satisfied = 9%
- Don't Know = 1%

46% customers are satisfied

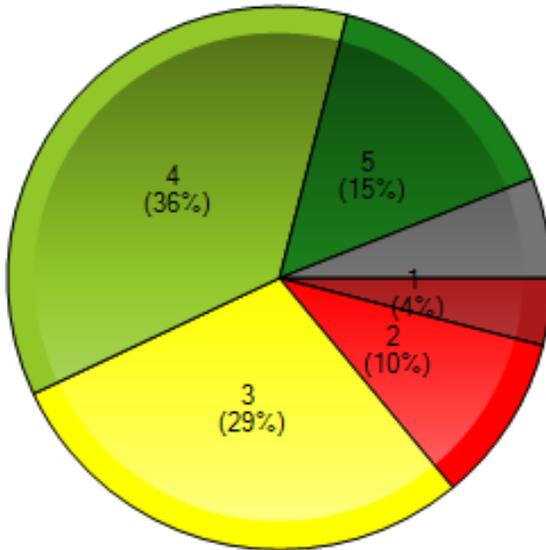
30% of customers are neutral

24% are unsatisfied

Citizen Satisfaction

Timely Response to Traffic Incidents

Timely Response to Traffic Incidents



51% customers are satisfied

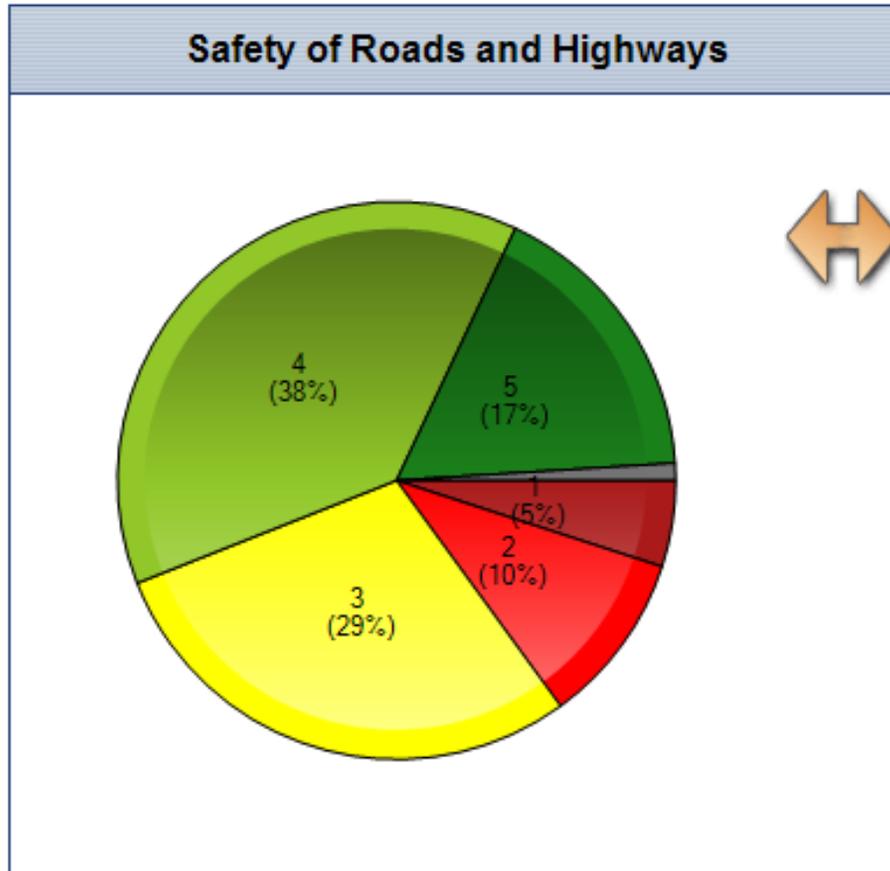
29% of customers are neutral

20% are unsatisfied

- 5. Very Satisfied = 15%
- 4. 36%
- 3. 29%
- 2. 10%
- 1. Not at all Satisfied = 4%
- Don't Know = 6%

Citizen Satisfaction

Safety of Roads and Highways



55% customers are satisfied

29% of customers are neutral

16% are unsatisfied

- 5. Very Satisfied = 17%
- 4. 38%
- 3. 29%
- 2. 10%
- 1. Not at all Satisfied = 5%
- Don't Know = 1%

Dashboard Demo

Next Steps

Next Steps

- Update data sources for key operations measures
 - Currently using traffic count stations
 - VDOT is now utilizing Inrix data to provide traffic information on its 511 site

Weather [Log in to Customize](#)

Traffic Alerts [+20 New](#)

Info

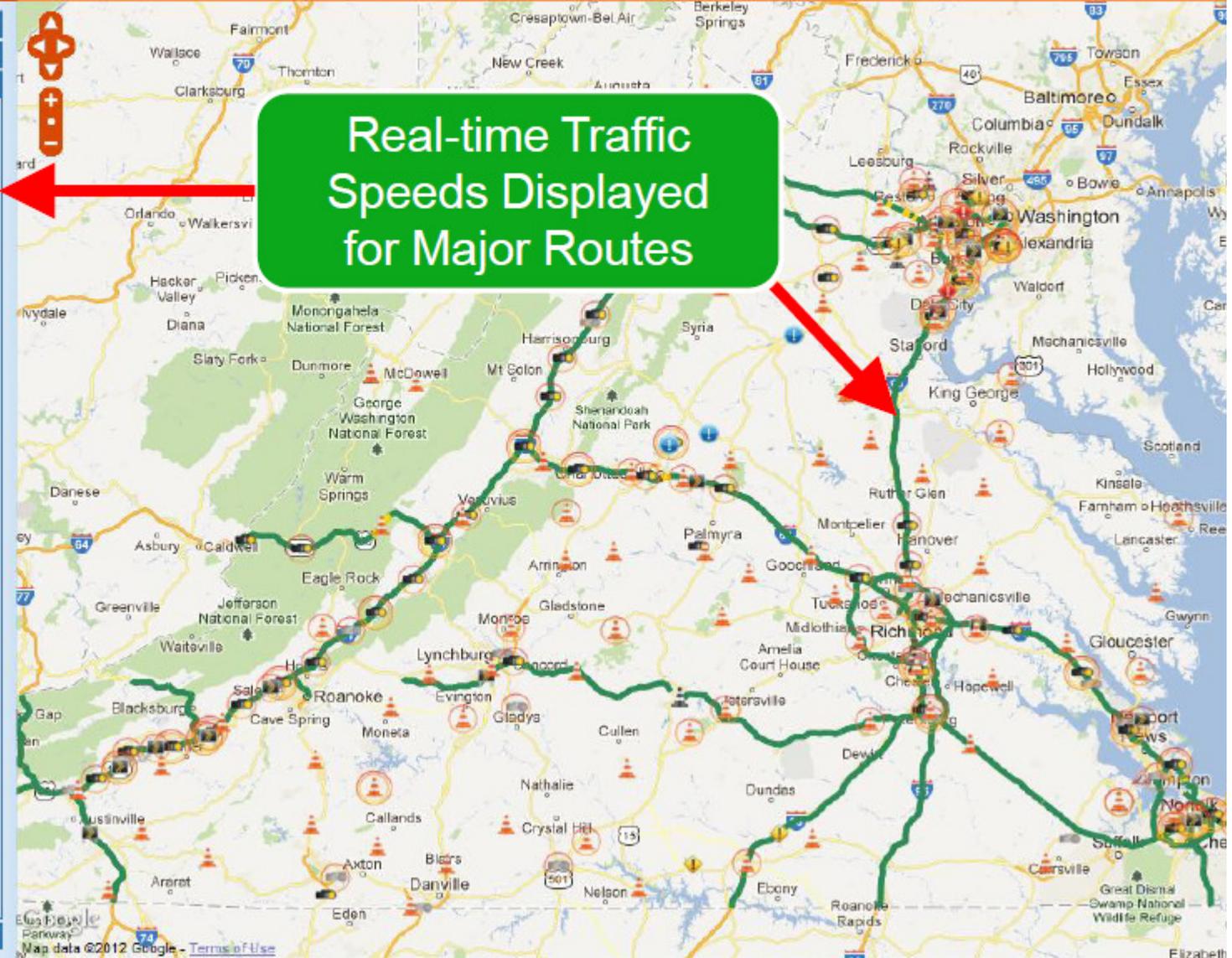
I-95

Northbound Lane	Southbound Lane
Speed 65 mph	Speed 65 mph

I-95 from Plank Road Fredericksburg to The Capital Beltway (41.2 miles)

Northbound Lane	Southbound Lane
Speed 60 mph	Speed 30 mph
Travel Time 40 min	Travel Time 72 min

Legend [more info](#)



My 511 | Map Views | Text Views | Resources | Reach the Beach | Contact Us | Help

Weather [Log in to Customize](#)

Traffic Alerts [+ 20 New](#)

Info

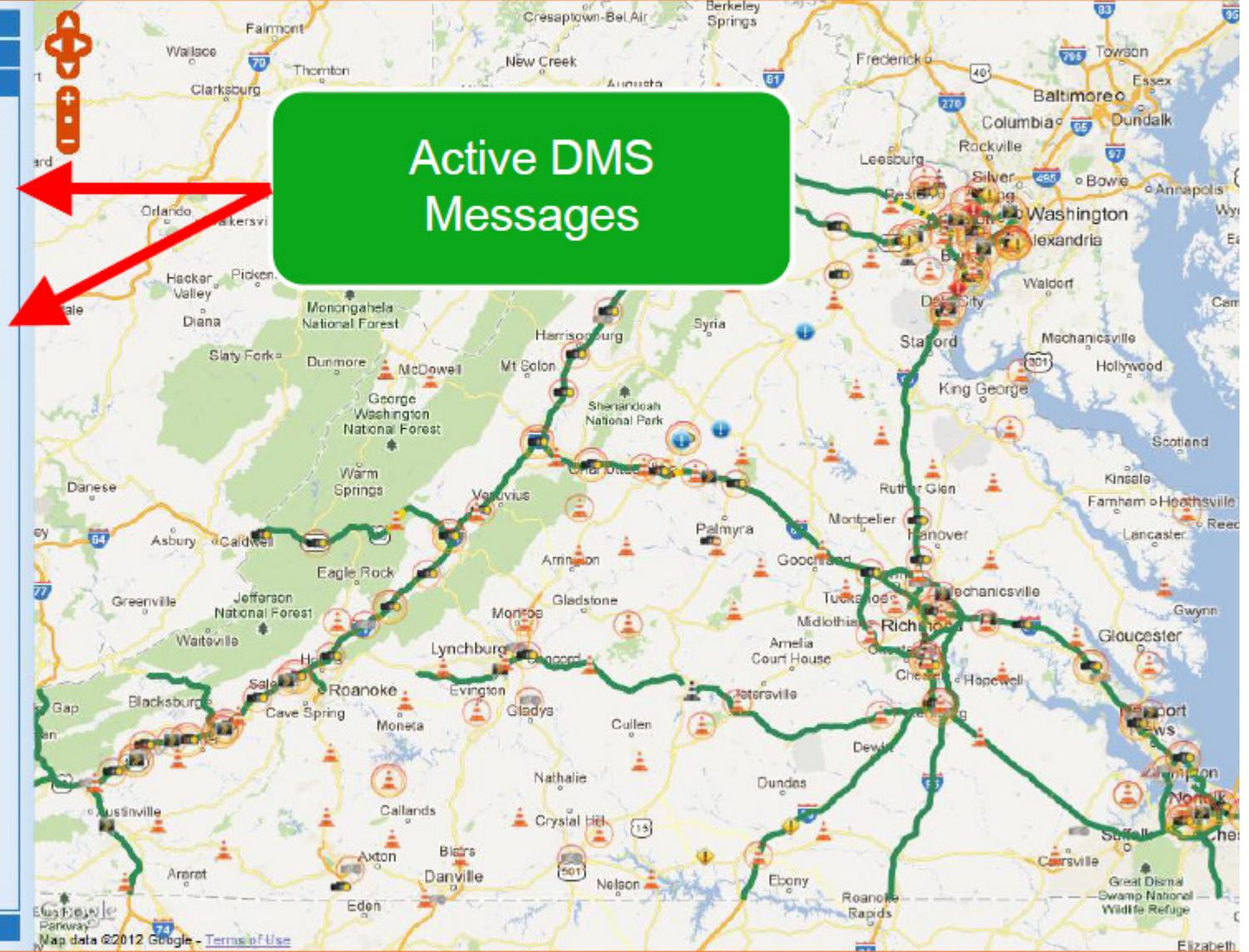
I-295 south at MM 38.1

BRIDGE WORK
THIS
WEEKEND
I-64 WEST
NEAR EXIT 193
EXPECT DELAYS

I-64 west at MM 194.4

BRIDGE WORK
THIS WEEKEND
NEAR EXIT 193
EXPECT MAJOR
DELAYS

Legend [more info](#)



Reach the Beach

Info

Demo

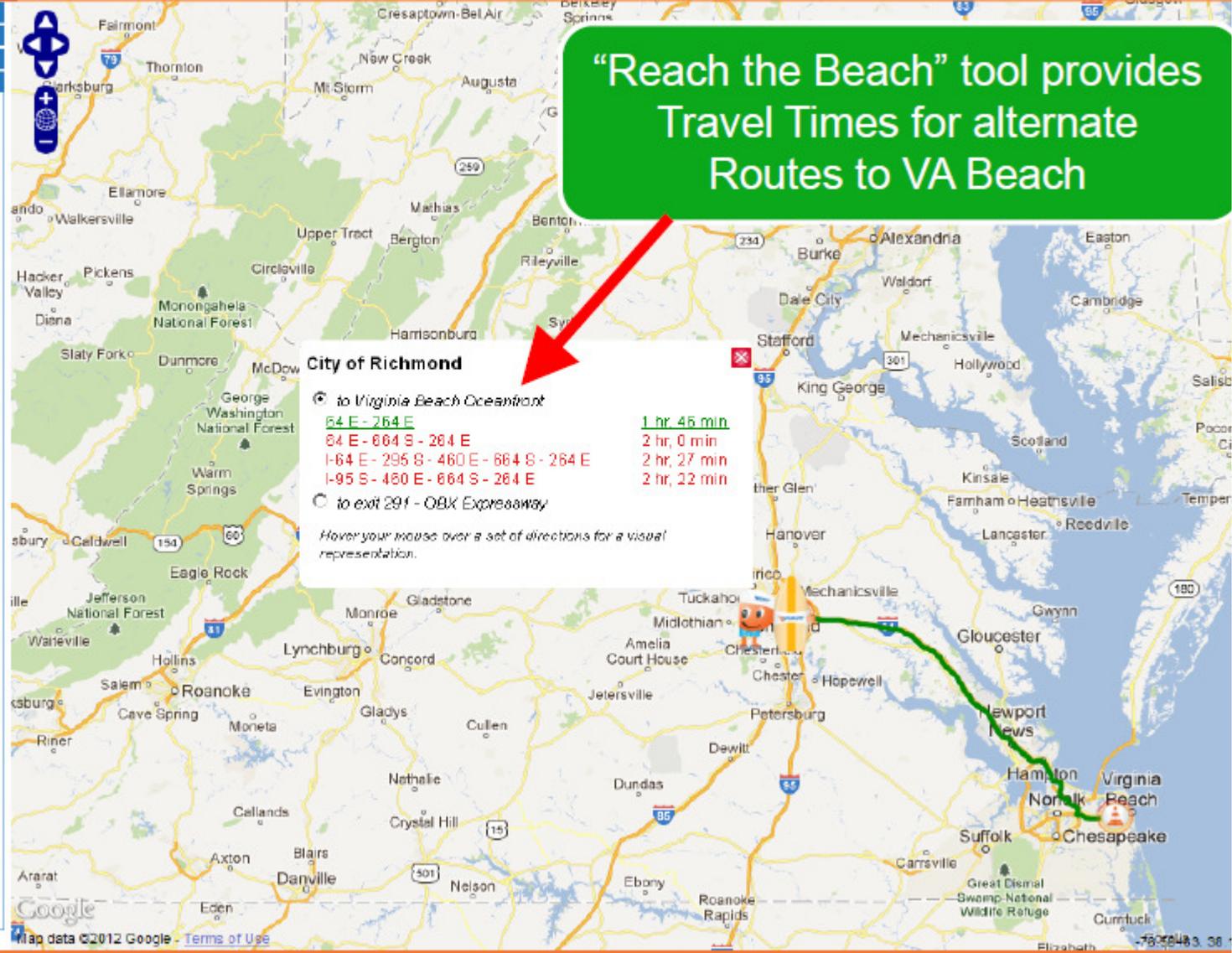
Legend

Trip-Planning Tools

- Origin Point
- Reach the Beach Sign
- Fastest Route
- Slower / Alt. Route

Road & Weather Info

- Road Work
- Inactive Road Work
- Message Sign
- High Priority Incidents
- Other Incidents
- Open Bridges
- Special Events
- Weather Closures
- Other Weather Events
- Cameras
- Inactive Cameras



“Reach the Beach” tool provides
Travel Times for alternate
Routes to VA Beach

Next Steps

- Develop “cascading measures” that support the key business outcomes. Examples may include:
 - Travel time information that is less than 10 minutes old
 - No more than 15% error in travel time information
 - Travel time information available 90% of the time
- In position of well poised to meet requirements of MAP-21 Program Areas
 - Update the data-warehouse to ensure all data elements are available for reporting in the Dashboard
 - Add new and/or modify existing Dashboard views for data and performance results



VDOT's Dashboard

Sid Detmer, PMP

Dashboard Manager, Performance and Strategic Planning Team

March 15, 2013