No Boundaries Presentation

Highway Maintenance Management System

August 29, 2017

Steven R. McNeely

Assistant District Administrator – Maintenance

(District Maintenance Engineer)

Richmond District

VDOT Districts

Fun Facts

- VDOT Budget is $5B each year
- 7,725 VDOT Employees
- 882 District Employees
- 567 Maintenance Employees
- 45 Equipment Employees
- 5,100 Pieces of Equipment Valued at over $80M
- 4 Residencies
- 27 AHQs
- 14 Counties
- 1.3 Million citizens in District (15% of State)
- 7.7M miles traveled by district vehicles each year
- Average 50 bridge hits each year
- $500K per year in tires

Statewide Program

Organizations and Categories	Cardinal Allocations
⊟ Central Office	$244,776,583
⊟ Bristol	$158,889,268
⊟ Salem	$204,855,147
⊟ Lynchburg	$136,139,405
⊟ Richmond	$236,594,507
⊟ Hampton Roads	$178,130,481
⊟ Fredericksburg	$110,302,253
⊟ Culpeper	$95,757,154
⊟ Staunton	$148,833,995
⊟ Northern Virginia	$304,283,455
Grand Totals	$1,818,562,249

Pavement Lane Miles

District	Interstate	Primary	Secondary	Frontage	Total
Bristol	528	2,809	12,306	112	15,755
Salem	493	2,668	14,731	105	17,997
Lynchburg	0	2,805	12,397	43	15,245
Richmond	1,323	3,439	13,932	75	18,769
Hampton Roads	874	1,770	7,122	92	9,858
Fredericksburg	281	2,190	9,279	24	11,774
Culpeper	279	1,852	8,282	52	10,465
Staunton	940	2,482	10,473	75	13,970
Nova	725	1,732	10,878	78	13,413
Statewide	5,443	21,747	99,400	656	127,246

Structure Inventory

Table 1 – Total Number of Bridges and Large Culverts

DISTRICT	Number of Structures (Bridges and Large Culverts)				
	Interstate	Primary	Secondary	Urban	Total
Bristol	216	954	2,033	208	3,411
Salem	218	809	1,945	102	3,074
Lynchburg	0	661	1,395	58	2,114
Richmond	521	782	1,120	161	2,584
Hampton Roads	455	450	498	282	1,685
Fredericksburg	82	254	476	7	819
Culpeper	121	499	1,054	22	1,696
Staunton	429	828	2,137	108	3,502
NOVA	379	546	1,228	46	2,199
Grand Total	**2,421**	**5,783**	**11,886**	**994**	**21,084**

What is HMMS?

- **A new VDOT-wide work order system and asset management application that will replace AMSWA and add additional capability and tools to assist asset owners in managing their business.**
  - **Map-based application using GPS location**
  - **User-friendly mobile function - allowing smartphone & tablet use**
  - **Interfacing with existing VDOT systems for data exchange**
  - **Ability to manage inventory of local assets of greatest business importance and maintain a work history**
  - **Asset Management functionality for system to generate Work Orders according to business defined rules e.g. cyclical frequency, condition etc.**

What is HMMS?

1. Ancillary Structures
2. Tunnels & Movable Bridges
3. Signals
4. WebIMS
5. SWM (Basins & MS4 Outfalls)
6. AMSWO
7. Other Drainage (Cross Pipes, Drop Inlets & Sidewalks)

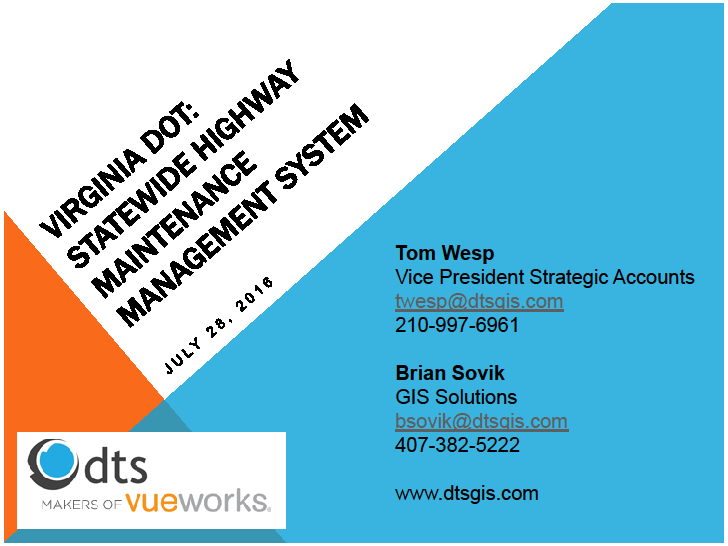
HMMS Benefits for VDOT

- Respond to and close work orders in the field.
- Single, user-friendly point of entry for field business needs.
- Use map and GPS to locate assets and work orders in the field.
- Have a map-based work history by location
- System can automatically generate work orders
  based on your business needs,
  e.g. annually required inspections
  or frequent problem areas can be
  flagged to check on some frequency.

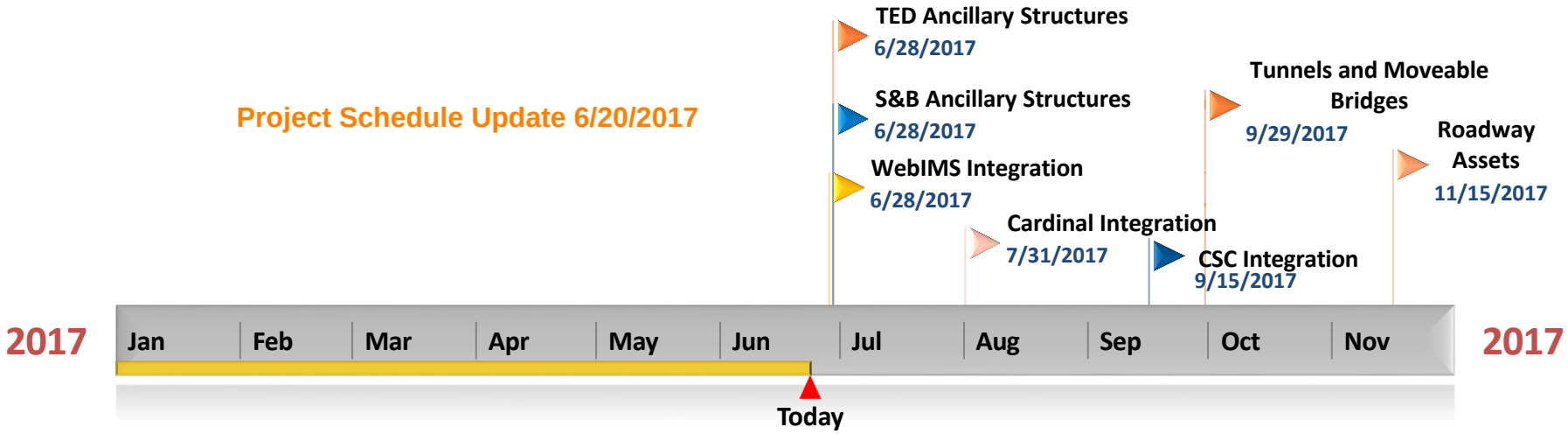
HMMS Benefits for VDOT

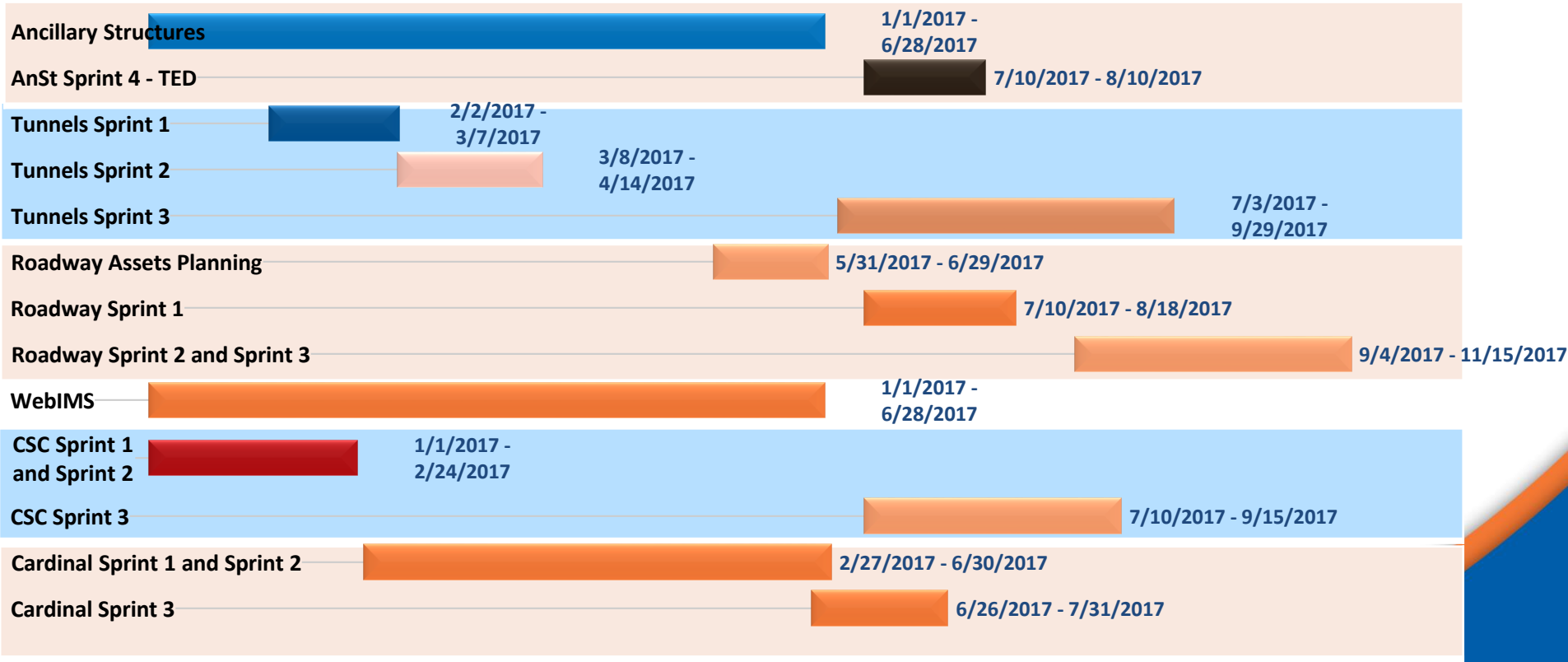
- Improves efficiency for better work planning and execution.
- Creates consistent business processes agency-wide
- Reduces risks due to failure and age of existing systems (Ancillary Structures, Tunnel Facilities, AMS Work Orders)
- Meets needs for new Federal data collection requirements (MS4, MUTCD, MAP21)
- Reduces IT expenses for maintaining multiple independent systems.
- Approximately a 2yr payback from improved efficiencies and reduced staff time.

Vue Works


VIRGINIA DOT:
STATEWIDE HIGHWAY
MAINTENANCE
MANAGEMENT SYSTEM
JULY 28, 2016
dts
MAKERS OF vueworks
Tom Wesp
Vice President Strategic Accounts
twesp@dtsgis.com
210-997-6961
Brian Sovik
GIS Solutions
bsovik@dtsgis.com
407-382-5222
www.dtsgis.com

Project Schedule Update 6/20/2017





HMMS Budget on 6/20/2017

HMMS LINE ITEMS	FY16		FY17		FY18		LTD	
	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL
ITD Cost	$300,000.00	$261,600.00	$1,279,087.57	$901,653.58	$407,920.72	$0.00	$1,987,008.29	$1,163,253.58
Vendor Cost	$0.00	$0.00	$3,311,696.41	$1,347,465.00	$2,372,653.56	$0.00	$5,684,349.97	$1,347,465.00
Infrastructure/Mobile	$0.00	$0.00	$2,101,973.84	$50,451.17	$211,795.17	$0.00	$2,313,769.01	$50,451.17
Procurement SOW	$440,000.00	$440,000.00	$0.00	$0.00	$0.00	$0.00	$440,000.00	$440,000.00
Risk/Contingency	$0.00	$0.00	$501,015.00	$0.00	$750,001.73	$0.00	$1,251,016.73	$0.00
TOTAL	**$740,000.00**	**$701,600.00**	**$7,193,772.82**	**$2,299,569.75**	**$3,742,371.18**	**$0.00**	**$11,676,144.00**	**$3,001,169.75**
Adjustments	($38,400.00)	$0.00	$38,400.00			$0.00	$0.00	$0.00
TOTAL AFTER ADJUSTMENTS	**$701,600.00**	**$701,600.00**	**$7,232,172.82**	**$2,299,569.75**	**$3,742,371.18**	**$0.00**	**$11,676,144.00**	**$3,001,169.75**

Note: Actual spend does not match Cardinal. Pending Invoices to be entered in Cardinal

Questions