Virginia State Police



- In order for the STARS Network to be sustainable and to prevent the Commonwealth from having to procure a new system, replacing end-of-life technology is essential.
- VSP has the responsibility for equipping new vehicles, aircraft, and boats belonging to all <u>22</u> <u>STARS agencies</u>. Also, removing equipment from decommissioned or crashed vehicles, and the refurbishment and re-installation of the reconditioned hardware into other vehicles.

VSP maintains over <u>70,000 STARS assets</u>.

- On July 13, 2004, the STARS contract with Motorola was signed.
- On July 1, 2011, the VSP Communications
 Division assumed the engineering, installation,
 maintenance, and operations of the STARS
 system on the behalf of the Commonwealth.
- Since 2004, the infrastructure, hardware and software have aged and began to deteriorate.
- Maintenance demands of the network cause VSP's workload to increased exponentially.

- > Prior to July 2012, most of the STARS agencies had their STARS radios installed and decommissioned by Motorola Service shops.
 - > Prior to 2012, VSP averaged 25 or less vehicles per year.
 - In 2014, VSP processed 262 vehicle requests
 - In 2015, VSP processed 311 vehicle requests
 - > As of July 2016, VSP has received and processed 296 vehicles
 - The workload has increased, however staffing has remained the same

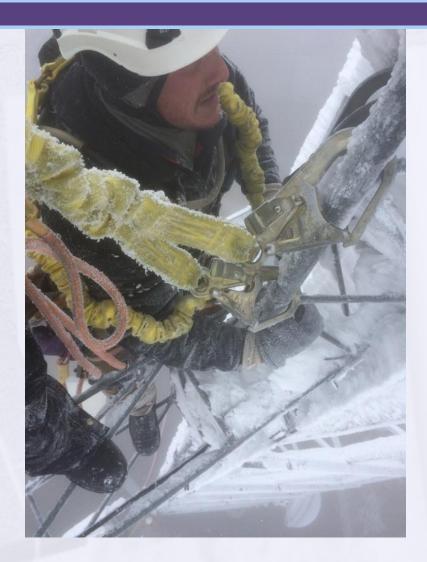
- The vehicle maintenance garage has also encountered sharp increases
 - In 2014, 620 vehicles were serviced
 - In 2015, 770 vehicles were serviced
 - > In 2016, it is projected that 900 vehicles will be serviced
 - Staffing Levels have remained the same
- Over the last 2 years, 88 compressor change outs were completed for the STARS HVAC systems.
 - Cost per-unit is \$2,000.00
 - A contractor charges approximately \$3,500.00
 - VSP saved the Commonwealth \$132,000 without a dedicated HVAC Position

- In today's threat environment, the need to enhance interoperability with local and federal partners demands VSP to support these endeavors.
- As technology continues to advance, the cost to maintain and support STARS continues to increase.
- In order to sustain the network over the next 7 years, the cost is forecasted at nearly \$130 million dollars.
- > This includes items such as:
 - Equipment, Servers, Required upgrades,
 Software, Annual Sustainment, and People

- Due to the number of future projects, upgrades, maintenance, support, and new technology, it is anticipated that staffing levels will also need to be increased.
- In order to sustain the STARS network, a systematic approach to replace aging systems and equipment must be set in motion in order to project future fiscal impacts and staffing requirements.

VSP maintains and supports the STARS Network on a 24/7 basis by utilizing dedicated VSP employees

- Engineers
- > Asset/Inventory
- Radio Shop
- Network Operations Center
- Field Radio Shops
- Field Installation Shops
- > Tower Crews
- Vehicle Installation and decommission garages



F	Y 2018	
-48VDC Power Plants	\$1.7 M	
Quantar Replacement	\$5.7 M	
Telscan Replacement	\$250 K	
STARS MDT Replacement	\$2.7 M	
Computer Aided Dispatch Server Replacement	\$1.4 M	
TDMA for SPHQ	\$324 K	
MDT Advanced Authentication	\$350 K	
FY 2018 Total - \$12.4 M		

Procurements to Begin in FY 2019	/2020

SIRS Replacement	\$2.9 M
XTL5000 Consolettes Replacement	\$3 M
Control Stations Replacement	\$3.8 M
Mobile Radios Replacement	\$38 M
XTS5000 Portable Radio Replacement	\$33 M
DVR Replacement	\$25 M
Maser Site Disaster Recovery	\$3.3 M
STARS MDT Hard Drive Encryption	\$700 K
Total \$110 M	

Procurement Timing Not Yet Determined		
Over-the-Air-Programming (OTAP)	\$1.1 million	
Over-the-Air Rekeying (OTEK)	\$208,000	
Annual Sustainment		
Annual MDT Replacements	\$541,000 Annually	
Microwave Radio Antenna Cover Replacement	\$60,000 Annually	
Zhone Multiplexer CPU Replacement	\$735,000 Total Replace as needed	
HVAC Replacement	\$60,000 Annually	
Motorola Lifecycle FY 2018	\$1,248,356	
Motorola Lifecycle FY 2019	\$1,269,916	
Motorola Lifecycle FY 2020	\$1,283,277	

FTE Requirements		
Garage Technicians (4)	\$132,000	
HVAC Technician (1)	\$44,000	
Interoperable Technician (2)	\$84,000	
Master Electrician (1)	\$60,000	

Fringe ~ 33% = \$105,600. Total: \$425,600

Cost Summary

> FY2018:

- > Beginning FY2019:
- > Time TBD:
- > Annual Sustainment:
- > Other Costs:
- > FTEs:

nt: \$661,000 \$4,536,549 \$425,600

> Total Projection:

\$129,055,149

\$12,424,000

\$109,700,000

\$1,308,000

Conclusion

- We have carefully assessed the life-cycle of existing equipment and developed a phased approach to replacing equipment with minimal impact to service
- VSP is tasked to administer the STARS
 Program to the Commonwealth and we have done so with great success
- This responsible approach ensures the continued success of the program



