FACILITIES BROADBAND

American Rescue Plan Act (ARPA) State and Local Fiscal Recovery Fund (SLFRF)

VDH VIRGINIA DEPARTMENT OF HEALTH

6/30/2022

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Report Mandate

Chapter 1 Enactment Clause 1, paragraph B.2.P.4., of the amended 2021 Acts of Assembly states, "The department shall communicate a detailed plan and implementation schedule to the Governor, the Chairs of the House Appropriations and Senate Finance and Appropriations Committees, and the Director of the Department of Planning and Budget by September 30, 2021. Additionally, the department shall report quarterly to the Governor, the Chairs of the House Appropriations and Senate Finance and Appropriations Committees, and the Director of the Department of Planning and Budget on progress made, with the first progress report to be delivered not later than December 31, 2021."

Context for ARPA Initiatives

The Virginia Department of Health (VDH) is excited about the opportunity presented by the appropriation of ARPA State Fiscal Funds in the August 2021 Special Session II of the General Assembly to improve public health in Virginia. VDH views this investment as a once in a generation opportunity and will work diligently to maximize use of funds to initiate, implement and sustain these initiatives. Modifications to VDH's plans will be reflected in future quarterly reports.

Executive Summary

The Virginia Department of Health (VDH) seeks to upgrade the internet infrastructure of Local Health District (LHD) offices and client service areas throughout the Commonwealth to enable the delivery of broadband service at speeds of at least 100 Megabits per second (Mbps) download and 20 Mbps upload. As millions of Virginians pivoted to remote work and life during the COVID-19 pandemic, it underscored the importance of universally available, high-speed, reliable, and affordable broadband coverage for all citizens. Individuals and families continue to rely on the internet to increase their awareness of COVID variants, locate local healthcare resources, and request immunization records.

The COVID-19 pandemic exacerbated the demand for timely and accurate health data from VDH, which is necessary for public health decision-making and transparency with the public. In addition, sufficient broadband allows for timeliness and accuracy in the delivery of public health resources that use web-based services (where services are scheduled, documented, and reported via those web-based systems and are reported to multiple different sources – such as vaccinations to Virginia Immunization Information System, VIIS).

With nearly 96% of assessed VDH buildings currently unserved by broadband (speeds less than 25 Mbps download and 3 Mbps upload), significant internet infrastructure upgrades are imperative for VDH to adequately serve Virginians post- COVID-19. The ARPA SLFRF funding will be used to upgrade unserved and underserved VDH facilities via fiber optic broadband connection, wireless 5G broadband connection, or reliable wireline connection.

Over the last three months, VDH has launched a pilot project to deliver broadband to 17 sites across the Commonwealth. VDH selected 3 vendors capable of servicing the sites and utilized the pilot to test the quality of these vendors, better understand the end-to-end process for implementing broadband, and collect lessons learned to apply when implementing broadband at the remaining VDH sites. While the pilot project is still ongoing, VDH has used lessons learned from the pilot to kick-off Phase 1 of 3 at an additional 37 sites across the Commonwealth.

Objective(s)

The objective of this initiative is to add a broadband connection to unserved and underserved VDH buildings that will reliably deliver speeds of 100 Mbps download and 20-100 Mpbs upload, to:

- Enable internet speeds for the operation of an Electronic Health Records (EHR) system, digitized records storage, and increasingly automated administrative systems at each location

- Enable adequate bandwidth for employees to support day-to-day operations for the department

- Provide speeds adequate for two-way video conferencing between VDH and other stakeholders or patients who are unable to visit in person due to COVID-19

- Increase the capacity of each office to access online systems and resources to more efficiently complete daily operations and serve clients

Overview of Quarterly Progress (April – June 2022)

Since the submission of the March 31, 2022 quarterly report, VDH has completed the below activities associated with the Facilities Broadband Initiative. These accomplishments allow VDH to incorporate lessons learned from the ongoing Pilot Project to start Phase 1:

Key Activities and Accomplishments

- **Pilot Project**
  - Completed broadband vendor construction at 10 sites, including laying new fiber lines, where needed. However, all sites will require additional security upgrades to meet VITA requirements before upgraded service is experienced by LHD staff.

  - Managed broadband upgrades at 7 remaining pilot sites via management check-ins with vendors: resolved challenges faced by the LHDs and vendors, as needed. Two of these sites have ongoing construction that will be completed in mid-summer. The 5 remaining sites have met challenges that have slowed progress (e.g., local permitting challenges or additional preparedness upgrades needed on sites) and will not be completed until late summer.

- **Rollout to Remaining Sites: Phase 1 of 3**
  - Received quotes and assigned vendors to Phase 1 sites. Vendor quotes and Pilot Project successes confirmed decision to utilize the same 3 VITA-approved Broadband service providers that are servicing the Pilot sites. Vendors continue to offer competitive pricing including steeper discounts for Phase 1 than provided during the Pilot Project.

  - Submitted work orders to begin upgrades at Phase 1 sites. Notified LHDs and hosted kick-off meetings with point of contact from sites to explain the implementation process, LHD responsibilities, and other lessons learned.

- **Internal Engagement**
    - Created live tracking document to track site status, updates from vendors, and next steps at sites in real-time. Used agency-wide forums to share site status and answer LHDs stakeholders' questions about rollout.

    - Defined procurement and invoicing process to track costs related to supplemental construction / room readiness upgrades that are required at some sites before broadband vendor construction can begin.

- **External Engagement**
    - Continued to work with the VA Department of Housing and Community Development (DHCD) and included Department of Social Services (DSS) to determine how the agencies' projects can collaborate across the Commonwealth's overall Broadband strategy. The agencies are currently in discussions with VITA around updating VITA policy to allow for shared services, avoiding duplicative costs to the Commonwealth.

Anticipated Next Quarter Activities (July – September 2022)

The following outlines the activities and tasks planned from July through September 2022:

- **Pilot Project**
    - Finish broadband vendor construction at remaining Pilot sites

    - Install required security features before activating upgraded broadband services at LHD sites

- **Full Broadband Rollout: Phases 1-3**
    - Manage rollout of broadband upgrades at 37 Phase 1 sites using lessons learned from the pilot program to minimize risk and exposure to unforeseen changes

    - Survey all sites to understand wireless capabilities. Plan and implement wireless upgrades at sites, as needed, to ensure that sites can fully utilize their new broadband services and that future VDH needs (e.g., electronic health records) will be fully supported

    - Support joint DHCD-DSS-VDH efforts to align broadband expansion across the Commonwealth and find opportunities for collaboration, cost savings, and efficiency through shared broadband services

Risks and Risk Management

- **Risk 1:** In order to launch the broadband services that have been installed, it is necessary for a security solution (SD-WAN or Secure Gateway) to be live at the sites

  - o **Mitigation Strategy:** Secure Gateway will be used as an initial security solution, while the use of SD-WAN is evaluated as a longer-term solution. The evaluation of SD-WAN will be completed prior to the EHR implementation.

- **Risk 2:** The overall cost of the Broadband project could be exceeded if the actual costs exceed the estimated project cost

  - o **Mitigation Strategy:** Conduct a pilot project to better understand the cost across the timeline of the project to create a total cost projection to better estimate the overall cost of the state-wide rollout. This will then be used to research opportunities to advocate for cost reductions to centrally purchased tools (e.g., security features) or find cost savings with vendors.

- **Risk 3:** The level of effort required to manage the Broadband project may exceed the available resources within the VDH team, which would result in timeline delays. Additionally, the recently announced departure of a key VDH-OIM team member may increase the severity of this risk.

  - o **Mitigation Strategy:** Use the pilot project to better estimate the necessary resources to manage the state-wide rollout. VDH has subsequently brought on two additional contractor resources for both project management and network engineering support.

- **Risk 4:** VDH funding to support broadband services charges funds may be insufficient once the ARPA funds expire, resulting in the sites losing service

  - o **Mitigation Strategy:** VDH is beginning to assess ongoing service fees to request additional funds for when ARPA funds expire. If additional funds are not available, VDH will remove the wireline service and use those savings to pay for the Broadband service. This will result in no failover (backup) connectivity if Broadband service is disrupted.

- **Risk 5:** There is a dependency on the availability of the hardware that is necessary to make the broadband upgrades at each site – if there are supply chain delays on inventory, then the Broadband project could be delayed

  - o **Mitigation Strategy:** The impacts of procurement delays to critical equipment and material deliveries can be mitigated through comprehensive planning and scheduling efforts through collaboration with vendors. These measures will empower the VDH-IT team to confidently sequence projects and enable broadband technicians and engineers to assess site and facility conditions and order necessary equipment and materials with sufficient lead time between material ordering and the scheduled start date for installation.

Change Management Considerations

VDH understands that successful transformation initiatives rely on more than just the right technology, processes, and resources. They also depend on effective change management, communications, and engagement strategies to ensure stakeholders are equipped with the information and guidance that they need to support the changes. For the Broadband initiative, the successful implementation of critical upgrades will depend on ongoing two-way communication and engagement with a variety of local contacts.

These activities have been outlined in a communications plan that maps key internal and external stakeholders, assesses how they may be impacted and/or their role in supporting the effort, and establish strong feedback loops and channels for information-sharing. The primary objective of the strategy is to convey and ensure VDH-IT's transparency through regular updates to all impacted groups. Core communications channels include regular status updates to stakeholders via email, an intranet site to house content for internal stakeholders, an initiative-specific email inbox for two-way communication, and regular briefings to Central Office and LHD stakeholders across a variety of VDH forums.

Project Budget

The project groups in the table below have been updated since the work plans submitted on 9/30/2021, due to the removal of wireline projects included in the initiative's original scope.

Total Appropriation: $8,000,000
FY22 Appropriation: $1,840,000

Budget, Obligations, Actuals, and Remaining Spend as of June 15,2022

Project Category	FY22 Budget	FY22 YTD Obligations	FY22 YTD Actuals*	Current Period Expenditures*	FY22 Remaining Spend
Service Charge	$ 609,667	$ 545,000	$ -	$ -	$ 609,667
Construction Costs	$ 582,667	$ 90,000	$ -	$ -	$ 582,667
Other Initiative Needs	$ 647,667	$ 583,500	$ 337,150	$ 63,550	$ 310,517
Total	$ 1,840,000	$ 1,218,500	$ 337,150	$ 63,550	$ 1,502,850

* Expenditures represent transactions that have posted in Cardinal F&A as of 6/15/2022

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