

STATE BOARD FOR COMMUNITY COLLEGES AND OCCUPATIONAL EDUCATION

February 9, 2022

TOPIC: Spending Authority Request for Community College of Aurora's Information Technology Infrastructure Upgrade Project

PRESENTED BY: Dr. Mordecai Brownlee, President

RELATIONSHIP TO THE STRATEGIC PLAN:

- Commitment to academic excellence.
- Commitment to institutional growth and excellence.

EXPLANATION:

The Community College of Aurora's Information Technology (IT) infrastructure contains several pieces of equipment that is outdated that is either near its end-of-life (EOL) and/or end-of-support (EOS). As a result, there have been times we've been incapable of meeting student, staff, and faculty accessibility and performance demands since the onset of the pandemic. The legacy wireless technologies currently in-use have created significant WIFI shortfalls creating a need for optimization and replacement of existing network, server, and storage hardware. In addition, our ability to ensure continuous availability and performance to meet the demands of the educational services we are required to provide is inadequate. The network, storage, and hardware have or is reaching EOL and is close to reaching EOS. To mitigate the security risk as well as the potential catastrophic results of a hardware failure and extended outages, replacing outdated hardware technology is necessary.

The current network and physical infrastructure were not designed to deliver to students, staff, and faculty in a remote, hybrid, and hybrid classroom delivery methodology. In addition, current network servers and storage cannot handle the heavy demands and loads that exist as a result of the pandemic. Our wireless range access is limited by outdated hardware access points with limited distance capacity and an insufficient number of access point placements. Most students are using newer technology for wireless access and our infrastructure is comprised of older devices and wireless technology that are that have created connectivity issues for our students and faculty.

The Community College of Aurora is requesting approval to spend \$1,840,225 of the institutional portion of its Higher Education Emergency Fund American Recovery Plan funding to upgrade our IT infrastructure. The request is needed to overcome the challenges to accessibility, reliability, and performance to support student, staff, and faculty due to pandemic-related changes in the demand for and environment related to Internet-based access and educational services.

Upgrading our IT infrastructure will provide the following:

- 1. Remote/Hybrid Learning:** This solution will expand, enhance, and secure our current student open-wireless services, eliminate existing dead spots on both campuses internally and externally, and provide a much needed secure and robust Wi-Fi connection that meets demand, applies security best practices that include intrusion detection (IDS) and intrusion prevention systems (IPS), with access control for authentication restricted to authorized student/users only.
- 2. Student Internet Secure Accessibility:** A sizable number of our students forced to attend classes remotely reside in households that do not have internet access available for online learning. Securing the existing open student-wireless infrastructure and expanding connectivity to wireless servers to remote areas of our campus, allow students to safely access wireless Internet services and continue their educational endeavors online.
- 3. Perceived benefits:**
 - a. Performance--improved network performance;
 - b. Elimination of long-terms for equipment failure (HW) lacking maintenance and support;
 - c. Room for growth and scalability for additional student services with remote and on campus classes (hybrid) for students, faculty, and staff;
 - d. Improved security with faster and robust technologies e.g., intrusion detection/prevention systems and access control for authentication restricted to authorized users;
 - e. Ease of administration in security with firmware update with less administrative overhead for staff; and less risk for long-term outages deterring students from accessing courseware for On-campus hybrid and remote learning platforms;
 - f. The implementation of pro-active monitoring capabilities for detection of failures before they occur;
 - g. Long-term cost savings with moving from standard UPS batteries (needing replaced every 2 years) to 10-year lithium batteries with full support; and
 - h. A complete documented network topology, representative of a redesigned scalable network that will continue to meet student, staff, and faculty accessibility growth requirements

RECOMMENDATION:

Staff recommends the Board approve spending authority for the CCA IT infrastructure project as outlined above, with a do not exceed total spending authority of \$1,840,225 of the college's institutional federal stimulus funding. Staff also recommends the Board delegate signature authority to the System Vice Chancellor of Finance and Administration for related documentation, on the condition that all the Board and State processes are followed.