

# STATE BOARD FOR COMMUNITY COLLEGES AND OCCUPATIONAL EDUCATION

August 11, 2021

**TOPIC:** Spending Authority Request for Information Technology Disaster Recovery/Business Continuity Plan Continuation

**PRESENTED BY:** Julie Ouska, Chief Information Officer and Vice Chancellor of Information Technology

## **RELATIONSHIP TO THE STRATEGIC PLAN:**

Redefine Our Value Proposition through Accessibility, Affordability, Quality, Accountability, Resource Development and Operational Excellence

## **EXPLANATION:**

### Background

After the significant flood that hit the metro area in the Fall of 2013, the Board approved spending authority to plan, formulate, and contract for an IT disaster recovery site in order to maintain continuity of operations in the event of a significant weather or other event that could disrupt operations at the Lowry campus IT center. Lowry IT serves as the hub for the colleges' wide area network, telecommunications, email, and back-office Banner/ERP functions. If Lowry IT is down, all of our colleges are down—if IT equipment were to be damaged, this downtime could be significant.

A team, including college presidents, executive staff, and system IT employees, was put together to prepare an RFP proposal and evaluate vendor responses/bids. After extensive research by system IT and consultation with Oracle and other vendors, system IT has put together an IT disaster recovery plan that covered both the revised scope RFP components (which include the wide area network and email/telecommunications) as well enterprise systems including a redundant environment for the Banner Student, Human Resource/Payroll, Financial Aid, Finance, Data Warehouse/Operational Data Store, Portal, Degree Works and Document Imaging modules). The plan supported the business functions of student enrollment, tuition and fee collection, advising, degree audit, business intelligence, data analytics, financial reporting, database encryption, data redundancy and transmission, email and voice communications and connectivity for all the colleges and the system office to the Disaster Recovery/Business Continuity site.

CCCS-IT staff spent a significant amount of time with Oracle and Ellucian technical staff identifying the appropriate Oracle and Banner tools required to replicate the data without data loss and ensuring data integrity. In addition, tools were identified to

manage the replication and failover in-house. Additional tools ensure data is encrypted at rest, in all databases, and also while in transit ensuring that our environment remains secure at all times. CCCS-IT staff also talked to other institutions that are using the methodology to validate that it was working as intended.

#### Current Status

As implemented, the plan provides for IT operations redundancy along the fiber loop and within the last mile of Lowry IT. If Lowry IT goes down, an automatic failover to a DR site occurs providing recovery of all data and resumption of normal operations within several hours. If a problem with one part of the fiber loop occurs, traffic is redirected to a redundant pathway with near zero loss of service. CCCS IT worked with vendors to provide last-mile redundancy and two Internet connections for all college campus locations, with the exception of the very small campuses and those that were not possible due to the significant expense to get redundant fiber to them. The DR/BC implementation has been fully complete for several years and failover tests are performed on a regular basis each year.

Staff anticipated changes in the technology environment over the ten-year period, so the original proposal to the board was for years one through five—with the exception of the dark fiber lease that was approved for 10 years initially. Staff indicated they would bring back to the Board the plan and seek approval for years six through ten.

#### Years Six through Ten

As expected, technology has changed over the last five years. There are new technologies for managing data and transition and failover between two locations which is faster, easier to configure and allows for failover within minutes rather than a few hours. Many failover activities can be automated that have previously required staff to invoke and run specific scripts for each activity. The replacement hardware and software takes advantage of these new technologies.

As we investigated a full cloud strategy, we discovered that some of our vendors are still working out their cloud strategies and are not ready quite for us to migrate to the cloud. We have already begun our migration to the cloud for Microsoft 365, which will encompass e-mail for faculty and staff, user file storage, departmental shares, SharePoint and other Microsoft tools and applications. Ellucian, our vendor for Banner and associated applications, is building their cloud architecture and environment, so that migration is not imminent and as a result, components of our Banner environment may be ready for cloud migration sooner or later than others. As a result, instead of purchasing hardware for years six through ten, we are recommending leasing the hardware. This approach gives us the latitude to move systems to the cloud as we deem appropriate rather than on someone else's schedule. We will continue to assess opportunities to move datacenter operations to the cloud over the next 5 years. We do need to remain at the One Neck datacenter because of the investment in our redundant WAN and telecommunications services that are physically located at One Neck and cannot be easily or inexpensively moved.

CCCS-IT has proven over the last 5 years that the redundant data center is critical to our daily operations. The Board's approval of our initial plan has allowed CCCS to maintain operations of critical services to the colleges and the students including our ability to support the CCCS environment throughout the COVID pandemic without interruption as well as reducing or eliminating outages due to hardware failure, fiber cuts and other types of technology outages. CCCS-IT is requesting to continue the contract with OneNeck utilizing them as a co-location facility for the next 5 years. As a part of the hardware upgrade, we will eliminate the Hardware as a Service (HaaS) portion of the contract with OneNeck and leased hardware will be placed in the co-location space at One-Neck and at the Lowry data center. This approach will pave the way for migration to the cloud over the next 3-5 years. The funding for Disaster Recovery/Business Continuity was included in the budget presented to the board in June.

**RECOMMENDATION:**

Staff recommends the Board approve spending authority to continue with the operations of the IT Disaster Recovery/Business Continuity plan as outlined above, with a do not exceed amount of \$10,884,960 in on-going costs and the hardware lease for the second 5-year term. The Staff also recommends that the Board delegate to the System Vice Chancellor of Finance and Administration the authority to sign all related contract documents on the condition that all Board and State processes are followed.