System IT Board Report
June 8, 2022

Mission for System IT

Vision of Success (What we seek to be)

We strive to be a model information and technology organization recognized for proactive leadership, collaboration, innovation, transparency and responsive customer service.

Mission Statement (What we do)

We, the employees of the Colorado Community College System Information Technologies, are committed to

- providing a robust and solid technology infrastructure
- facilitating the colleges' ability to teach and students' ability to learn
- supporting operational services and business functions at both enterprise and distributed levels.
- align our efforts and our projects with the Colorado Community College System's strategic goals of Transform the Student Experience, Transform Our Own Workforce Experience, Create Education Without Barriers Through Transformative Partnerships, Redefine our Value Proposition Through Accessibility, Affordability, Quality, Accountability, Resource Development and Operational Excellence.

Core Values (Guiding principles for achieving our mission and vision)

- Pride: We take pride in our work. We strive for personal and professional excellence. We recognize and reward initiative and problem solving.

- Quality: We ensure that our services and deliverables meet industry best practices found in both the technology and higher education industries while we adapt to an ever changing technology environment.

- Respect: We appreciate and value one another. Our actions are carried out with trust, integrity and fairness.

- Service: We focus on our customer needs, while being flexible and adaptable to business requirements. We recognize, in order to improve service, we must be a learning organization that seeks improvement and embraces accountability in a pro-active manner.

- Teamwork: We support a cooperative work environment. Our team is strengthened by the diversity and contributions of each member. We strive to communicate openly and honestly.

- Collaboration: We work together with our customers to find reasonable and flexible solutions to their business problems.   We seek to listen to our customers, understand their perspective and support their needs. We strive to say "yes, we can".

- We support and encourage an inclusive and transparent governance process for IT investments and projects.

Preface

System IT Information Technology provides support and implementation of all enterprise level technologies for the System office and the thirteen community colleges.   This includes Banner and all its add-ons such as Degree Works, the Portal, the data warehouse (Operational Data Store - ODS). In addition, SYSTEM IT supports EAB (Education Advisory Board) Navigate, CRM Recruit, Microsoft Exchange, Voice Over IP and universal communications, Wide Area Network, and all the associated infrastructure including servers, switches and routers.   System IT is divided into four areas: Business Technology, Applications Development, Institutional Research/Business Intelligence and Infrastructure. Overviews of each area are included with this document.

Through Business Technology, we provide an IT Governance Process and Project Management Office to ensure that projects undertaken by System IT meet the strategic goals of CCCS and the colleges and that projects are vetted and managed in a way that they will be successfully implemented. Our projects by nature are complex and not only involve technology but also can have a significant business process component.   Coordination with members of Executive Staff, college vice-presidents, the functional liaisons at the System office and key individuals from the colleges is critical.   For strategic technology guidance, we have an Executive IT Governance Committee which includes the Chancellor, Vice Chancellor of Academic and Student Affairs, Vice Chancellor of Administration and Finance/Chief Financial Officer, Executive Vice Chancellor/Chief Strategy Officer, General Counsel and four college presidents currently from CCD, LCC, MCC and PPCC. The Vice Chancellor of Information Technology/Chief Information Officer coordinates and staffs the meetings which occur approximately every two months.

System IT reports to Julie Ouska, Chief Information Officer and Vice Chancellor of Information Technology.

Please let me know if you have any questions.

Julie Ouska
Julie.ouska@cccs.edu

System IT Business Technology Overview

Highlights

Team Mission

System IT Business Technology is a results-driven project management office serving CCCS and our 13 colleges. Our mission is to provide quality solutions while keeping projects on-time, on-budget, and on-track and to facilitate the efficiency and effectiveness of the Colorado Community College System. We also provide high-level technical assistance to faculty and staff.

Team Structure

System IT Business Technology is a team comprised of:

- Seven Project Managers/Business Analysts
- Two Quality Assurance Analysts
- And One Director of Business Technology

The team was established in March 2013 and has worked collaboratively to establish processes that are closely aligned with the Project Management Institute (PMI) Project Management Body of Knowledge (PMBOK) Guide, while focusing primarily on supporting System strategic goals and initiatives, as well as the expressed business needs of the System and the 13 CCCS colleges.

The Project Managers and Quality Assurance Analysts are assigned to work with specific functional areas, as shown below. These are professional level staff members, having significant experience within the functional areas they represent, as well as project management and business analysis expertise. They also have varying levels of technical expertise.

Position	Area(s) of Responsibility
Senior Project Manager/Business Analyst – Enterprise Applications	Enterprise Applications (portal, document management) and support for Project Management Office
Project Manager/Business Analyst – Student, Financial Aid & Advancement	Financial Aid, Financial Aid/Student cross-over projects and Advancement
Senior Project Manager/Business Analyst – Student, Financial Aid & Advancement	Financial Aid, Financial Aid/Student cross-over projects and Advancement
Senior Project Manager/Business Analyst – Finance and HR/Payroll	Finance, HR/Payroll, Advancement/Foundation, and Student Accounts Receivable
Project Manager/Business Analyst – HR/Payroll	HR/Payroll
Senior Project Manager/Business Analyst – Student	Student
Senior Project Manager/Business Analyst – Student	Student
Senior Quality Assurance Analyst – Student & Financial Aid	Student, Financial Aid and Student Accounts Receivable
Quality Assurance Analyst – Student & Financial Aid	Student, Financial Aid and Student Accounts Receivable

Types of Projects

The majority of projects completed by the System IT Business Technology team are closely connected with the ERP System (Ellucian Banner – all modules, DegreeWorks and Ellucian CRM Recruit) and third party solutions which are integrated with Banner or require information to be extracted from Banner. Projects may include: implementation of newly licensed software, business process improvement, creation of new solutions to meet strategic goals and/or business needs, and both regulatory and non-regulatory upgrades.

Help Desk Support

In addition to managing projects for the colleges, Business Technology team members provide support for college personnel for technical issues related to the enterprise systems. Often, college personnel are not certain whether an issue is functional or technical in nature, and as a result, many of the support requests handled by Business Technology are related to functional issues.

VP IT Governance Committee

The Director and the Senior Project Manager/Business Analyst for Enterprise Applications provide support for the VP IT Governance Committee. This support includes: preparing monthly meeting agendas; following up with meeting notes and communication related to project request submissions; researching and sharing information to support Committee initiatives (such as Project Prioritization); establishing and maintaining a Committee SharePoint site; and managing and reporting on the SYSTEM IT and CCCOnline project portfolio from project intake to project completion.

In order to provide solutions that best meet the strategic goals and business needs of the System and colleges, System IT projects are governed and prioritized by the VP IT Governance Committee. The VP IT Governance Committee is comprised of a group of Vice Presidents representing several of the colleges and all major functional areas. This group continually strives to learn more about SYSTEM IT and the work that we do. A very positive benefit is that this group has become an advocate for SYSTEM IT and helps to inform others about projects that have been proposed, as well as the status of projects that are underway.

Collaboration

System IT Business Technology is a cohesive team who embraces a collaborative approach to our work. The team supports each other, as well as other members of SYSTEM IT. The team meets weekly to share updates, including lessons learned, and works together to further develop the maturity level of the System IT Project Management Office.

Background and Experience

Each Project Manager and Quality Assurance Analyst has many years of experience in higher education and in their respective functional areas.

Collegial Working Relationship

System IT Business Technology has established a collegial working relationship with the functional System Liaisons and with end-users at the colleges.

Project Portfolio Management

Approval was granted for to license PPM Pro by Planview for use in managing the project portfolio for each of these areas. The implementation of PPM Pro continues and the team is excited at the possibilities provided by this tool. Reports of project status across the portfolio for each fiscal year are prepared quarterly for the IT Executive Governance Committee and are distributed to college and System leadership after review by the committee.

Communication

System IT and CCCOnline prepares a monthly Active Project Updates report which provides a narrative update regarding all of our active projects. This report is distributed to slightly less than 700 individuals at the System office and colleges each month.

- Course Program of Study (CPOS) – Financial Aid Regulatory compliance and helps ensure students maintain their degree path
- Enhancements to concurrent enrollment data exchange, reduces manual effort and reduces data entry mistakes
- Three to four digit course conversion, part of the CourseLeaf implementation and allows for additional course numbers
- CIP/Program code Alignment (in progress), will provide for consistent CIP and program codes, allowing for a program catalog across all colleges for prospective students and others
- Covid Vaccination Tracking and Testing Protocol (Qualtrics)
- Bookstore adoptions for multiple colleges, allows colleges to adopt new bookstore functionality
- Financial Aid, Payroll and other regulatory updates and reporting, compliance
- Support for the Colorado Online Project, allows for a strategic approach to online course and online degree programs

System IT Applications Development Overview

Highlights

Team Mission

The division of System IT Applications Development is responsible for supporting in-house software development. This includes developing interfaces between Ellucian Banner and other third-party applications, building Banner customizations and add-ons, developing in-house web applications, and supporting other applications activities. The division serves primarily as a service organization for the Business Technology division in terms of applications development projects and support. The Applications Development division also collaborates with the all other System-IT divisions and teams to complete projects and to build, manage, troubleshoot, and support applications, databases, networks, and servers.

Teams Structure

The division of Applications Development is comprised of three teams of developers (programmer analyst), such that each team focuses on a specific functional area. The three teams report to the Director, Applications Development. The first team focuses on the areas of HR, finance, payroll, and financial aid applications. The second team focuses on the area of student applications. The last team (operation developers, DevOPs) focuses on the configuration, troubleshooting and administration of the CCCS Portal, Client Access Servers (CAS), Mobile and other application servers. This team provides support and guidance for the admin portals of the 13 CCCS colleges.

Although developers are assigned to work based on their specific functional areas, they work as one unit and can be assigned work that resides outside their functional area. It is also important to note that many of the System IT projects can cross multiple functional areas and require collaboration between different divisions and teams. The application developers are professional staff members, having significant experience within the functional areas they represent, as well as wide and deep technical skills.

The Director, Applications Development meets weekly with all developers to share updates on projects and discusses successes, failures, and future plans. The team leads organize daily standup meetings

(Scrum-style) with their team members to discuss daily progress, identify potential challenges, and coordinate efforts to resolve difficult and/or time-consuming issues.

Inherited Complexities

The unique and innovative structure for CCCS presents many technical challenges when it comes to customizing third party solutions to work for our environment. In many cases we find solutions that work greatly for other organizations do not perform well for us due to our size and the inherited complexities resulting from supporting 13 colleges. However, System IT members are intrigued by these challenges and constantly keep finding innovative solutions for such problems.

Select Achievements for FY22

In addition to providing the technical support for the projects listed in the Business Technology Key Achievement's section, the Applications Development Teams implementing the following key projects.

- Implementation of password reset for students, faculty and staff, reducing significantly the number of help calls and allows students, faculty and staff to reset their own passwords.

- Upgrades to Ethos Identity and the Luminis Portal, improved functionality and security

- Development Partner with Ellucian Experience (portal replacement), helping to ensure the product is scaleable and meets our multi-institution environment

- Phase 1 and 2 of CCCS Military Benefits Processing Applications completed, reducing workload on college staff, ensuring students are in compliance with military/veteran requirements and receive all their benefits

System IT Institutional Research & Business Intelligence (IRBI) Overview

Highlights

Team Mission

System IT IRBI strives to support the day-to-day operations of the System and empower leaders at CCCS and our 13 community colleges to make evidence-based decisions for the betterment of our students through high quality data, research, reports, and analytics. This work includes the development and maintenance of our Operational Data Store (ODS) and Cognos, which utilizes data in the ODS for reporting. Our team also produces System-wide data products, supports grants and the CCCS foundation, provides research support, and responds to legislative and media inquiries.

Team Structure

System IT Institutional Research & Business Intelligence is a department comprised of:
- One Director of Institutional Research & Business Intelligence
- One Assistant Director of Institutional Research
- One Assistant Director of Business Intelligence
- Three Business Intelligence/Data Warehouse Developers
- Three Institutional Research Analysts
- One Cognos System Administrator
- One Senior Oracle Database Administrator

In January 2019, CCCS consolidated the Institutional Research (IR) and Business Intelligence (BI) departments into a single unit with the aim of improving research and analytics capacity. This merger has brought several benefits to the department and has allowed us to serve the CCCS community better. One benefit was that the consolidation reduced the duplication of work, allowing us to better utilize personnel resources and increase services to the colleges. Another benefit was found in combining the technical skillset of the BI team with the analytic skills and subject matter expertise of IR, which allowed for more sophisticated reporting. Finally, this combined team has worked to improve the relationship between System-IR and the colleges' IR departments.

Challenges

One of the primary challenges is that there is an ever-increasing need for data and analytics with only so much staff to fulfill those requests. Additionally, a desire for data from sources other than Banner such as Degreeworks and Navigate, puts additional strain on the DBA's time to pull those data sources into the System and maintain them.

Services Provided

Training

The IRBI Team provides training to users on writing reports (using Report Studio) for Institutional Research staff and some Registrars. Fiscal Services users typically receive training in creating ad hoc queries (using Query Studio) in Cognos. To support on-going education and enhance skill development for Institutional Research Report Authors, a monthly Cognos Reporting Open Workshop (CROW) is held following the Institutional Research Advisory Group (IRAG) meeting. The BI Team also provides, on request, workshops for Internal Audit and Fiscal Services' Query Studio users. Training for new Report Authors and Query writers is provided when requested.

Cognos Reporting

Cognos is available to all 13 colleges and is used to develop reports that help senior leaders monitor trends and support day-to-day operations for the various business areas. All colleges have access to all data in the ODS (for their college), though business areas only have access to their own data. For example, human resources departments have access to human resources data but not to student data. Reports can be built off of 'live' data or 'frozen data'. Live data is data that is refreshed nightly (more often in some cases) with the most recent data. Most available data within Cognos is live data. Point-in-time, or frozen data, is a snapshot of data that does not change.

In addition to maintaining and enhancing the Cognos System, the BI staff develop Cognos reports for the System office and reports utilized across all 13 colleges. The BI team also aids IR offices with developing reports using cross-functional data they may not have access to.

System-wide Data Products

IRBI produces several System-wide data products including:

- Weekly FTE & Headcount Reports
- Strategic Plan KPM Dashboards
- System and College Data Books
- Annual Concurrent Enrollment & Developmental Education Reports
- Cognos Reports that Aid College SURDS Reporting

Ad Hoc System Reports

IRBI provides ad hoc reporting for the CCCS System office. Ad hoc reports may be generated for a variety of purposes including: grant and research support, legislative and media requests, internal policy discussions, and System initiatives.

Committees

Institutional Research Advisory Group (IRAG)

IRBI coordinates a System-wide group that includes IR Directors and staff from the 13 colleges. IRAG meets monthly to discuss data and reporting issues with colleges rotating who 'hosts' the meeting (i.e. creates the agenda and moderates the discussion). Members of IRAG share professional tips on reporting and as well as useful reports they have built. Additionally, there is a professional development subcommittee that looks for opportunities for members to improve skills. CROW workshops mentioned above are held after these monthly meetings. Finally, an annual retreat with more in-depth seminars on a wide range of topics is held in September.

Data Governance

The Director of IRBI serves as the Co-Chair of the Data Governance Committee - a cross-functional group of System and College employees – and the Assistant Director of IR chairs the Technical Definitions Subcommittee – a group consisting of IR professionals at several colleges that focuses on consistency of how data is pulled into reports via Cognos.

The Data Governance Committee is an advisory and decision-making body designed to ensure data Systems effectively address the business needs of colleges and the System, while also serving reporting requirements and evaluation demands. The Data Governance Committee has the authority to approve changes, additions, and deletions that impact CCCS data quality, collection, and reporting requirements. The committee oversees the CCCS data dictionary and data glossary, which includes and defines data elements used throughout CCCS and also aligns external compliance reporting instructions, data definitions, and requirements to the data entry, aggregation, and coding of System and college data.

Banner Integrity Group (BIG)

The Director of IRBI serves as the Co-Chair of the Banner Integrity Group - a cross-functional group of System and College employees responsible for reviewing and approving requests for new Banner codes (i.e. admissions and student cohort codes, student attributes, address types, etc.).

Analytics Committee

This committee is chaired by the Vice Chancellor of Academic and Student Affairs. Committee members include the Vice Chancellor of Information Technology and Director of IRBI at CCCS as well as Presidents, Vice Presidents, and Institutional Research Directors from the System and the colleges. The committee serves as a steering committee for CCCS' analytic strategy in furtherance of the strategic plan and data-driven decision-making. The committee also reviews changes to System-wide data products such as the Strategic Plan KPM dashboards, Data Books, and the Developmental Education and Concurrent Enrollment reports.

Key Achievements for FY22

- National Student Clearinghouse Post-secondary Data Partnership implementation, allows access to key data points and demographics of our students including other post-secondary institutions
- Integration of Desire2Learn (D2L) data and Degree Works data into the ODS, provides key data elements for the for use in conjunction with Banner data

- Degree Works reporting for CPOS, allows the colleges to verify program requirements are correct for CPOS and assists in college staff in helping students stay on course
- Support of reporting and data needs for the Legislative session, Adult Learner Summit, numerous grants, Board reports and College Data Books, allows for accurate data and quality analysis for various constituent groups

System IT Infrastructure Overview

Highlights

System IT Infrastructure is comprised of five key functional areas. These areas are Microsoft Cloud and Desktop services, Network services, System Administration, Network Security and Helpdesk/Change Management. Each of these functional areas play a key role in System IT as well as the support and needs of the CCCS colleges. These areas are managed by the Chief Technology Officer/Deputy CIO. This area works extensively with the colleges' IT Directors on many system-wide initiatives and projects.

Microsoft Cloud and Desktop Services

The Microsoft Cloud and Desktop services team is responsible for administering all E-Mail, Microsoft Active Directory (AD), and Microsoft 365 services System wide, along with all the technology that System office and CCCOnline staff at Lowry use to perform their job duties.

The team's desktop staff deploy and manage all laptop and desktop computers, peripherals and all audio/visual, training, and conference room technologies for the System office at the Lowry campus. They also administer and support user and departmental data storage along with virtual application and desktop technologies used System wide. These are professional staff members, having significant experience and expertise with the technologies that they support.

Most projects completed by these team members relate to System office hardware replacement and deployments along with supporting software on local computers for Banner applications and other business functions.

The team members responsible for messaging, directory, and Microsoft 365 services are responsible for all E-Mail related services and Systems, including SPAM and Phishing email prevention, and archived E-Mail. They manage all Systems and services and provide oversight for the statewide shared Microsoft Active Directory (AD) environment used to manage all user accounts. The team also administers all services of the shared Microsoft (Office) 365 tenant for staff and students.

Most projects completed by this team relate to E-Mail services, E-Mail security, authentication and authorization for network access, certificate services, federation services, rights management services, and Microsoft (Office) 365 services.

Position	Area(s) of Responsibility
Manager of MS Cloud and Desktop Services	Oversees all functions of this group and is a technical working manager also supporting key functional operations of the technologies managed by this group.
Technical Systems Analyst	Configures and deploys desktop hardware and software and supports users with desktop related issues. Also administers the virtual desktop infrastructure.
Technical Systems Specialist	Configures and deploys desktop hardware and software and supports users with desktop related issues. Also administers all desktop deployment technologies and user data services.
AD/Exchange Administrator	Administers and supports all Exchange E-Mail Exchange Online and Microsoft Active Directory technologies and services.
AD/Exchange Administrator	Administers and supports Exchange E-Mail and Microsoft Active Directory technologies, certificate and SAML authentication services.

Microsoft 365 and Azure AD Administrator	Administers and supports Enterprise Microsoft 365, Azure Active Directory, Active Directory, and Microsoft Exchange.

Network Services

The network services group is comprised of a working manager, a senior network architect, a network administrator and two senior unified communications administrators. This group is responsible for all wide area network connectivity, local Lowry campus network connectivity, wireless connectivity, voice over IP telephony, video conferencing and web collaboration. They deploy all connectivity from the two datacenters to all of the college campus locations where they hand off a local connection to the college campus for local IT staff to manage their internal network switching and wireless networks. They are responsible for all production and educational network access to/from the Internet. They manage the CCCS dark fiber network connectivity and all telephone services for the System office and the colleges. Webex video conferencing and WebEx collaboration are also handled by this group. These are professional staff members, having significant experience and expertise with the technology that they support.

Position	Area(s) of Responsibility
Manager Network Technologies	Oversees all functions of this group as well is a working manager supporting key functional operations of the technologies managed by this group.
Senior Network Architect	Responsible for all network design in the following areas: datacenter, local and wide area networking. Design assistance with college networks.
Network Administrator	Responsible for all network cabling, switch infrastructure, wireless infrastructure and fiber optic plant at the Lowry campus. Additional duties include assisting with the wide area network support and maintenance.
Senior Unified Communications Administrator	Responsible for the VoIP telephone System that supports all of the System office and the colleges, Webex video conferencing, call center Systems, E911, E-Fax and web collaboration technology.
Unified Communications Administrator	Responsible for the VoIP telephone System that supports all of the System office and the colleges, Webex video conferencing, call center Systems, E911, E-Fax and web collaboration technology.

The majority of projects completed by this team relate to everything network that allows users across the System to access the Banner ERP System, centralized services, telephone services, video conferencing for distance learning and meeting support, web collaboration for distance learning and meetings. Projects may include: deployment of new or upgraded hardware; improvements or new features for existing video/web technologies; deployment of new wide area network circuits, and round the clock support for providing datacenter availability.

The Manager Network Technology also provides support for the college IT personnel. This support includes: working with college IT and facility staff for new network connectivity, design of cable plants and coordination of Unified Communications between the System Office and the Colleges. The Senior Network Architect provides support for local college IT staff in assisting them with resolving network configurations and outages in their local networks. The Senior Unified Communication Administrator's

provide support for the local college IT staff with training on how to deploy telephone/video devices, designing, writing scripts for call centers and resolving college support ticket issues.

System Administration and Database Services

The System administration and database services group is comprised of a working manager, three senior System administrators and three senior database administrators. This group is responsible for Banner and third-party applications, monitoring of services, backups, automation, databases, server and storage System hardware in the Lowry and OneNeck datacenters. This group provides support for server infrastructure to all internal System IT, CTE and college IT groups as requested. These are professional staff members, having significant experience and expertise with the technology that they support.

Position	Area(s) of Responsibility
Manager System Administration and Database services	Oversees all functions of this group as well is a working manager supporting key functional operations of the technologies managed by this group.
Senior System Administrator	Responsible for: application management, automation, backup services, monitoring and alerting, server administration and patching, and System automation.
Senior Database Administrator	Responsible for: Oracle and SQL database administration, Banner application management and upgrades, and third-party Banner integrations.

This group engages in a wide range of activities. These include application and database management, alerting and System monitoring, automation and pipelining, disaster recovery, Microsoft and Linux server administration, and software administration and upgrades. The group is also responsible for providing the underlying database, server, and storage infrastructure for centralized and college-specific applications such as Active Directory, Exchange Email, File Sharing, ERP/Banner, IR/COGNOS, LMS Middleware, Ticketing and WeBWorK services.

Operations/Help Desk

The operations/help desk group is comprised of a working manager, a client support specialist, a customer coordinator and an operational applications administrator. This group is responsible for helpdesk calls supporting faculty, staff and students. They also process and schedule all automated processing jobs for Banner. These jobs process data transfers for financial aid, fiscal, etc. in addition to performing all centralized print functions for the colleges, such as warrants, W2's, 1099's, etc. Additionally, they perform all Banner security processing and auditing on a quarterly basis. These are professional staff members, having significant experience and expertise with the technology that they support.

Position	Area(s) of Responsibility
Director change and incident management	Oversees operations, helpdesk and change management, automated job scheduling
Client support specialist	Answers help desk calls and is the first line of troubleshooting for users having equipment, software or password issues.
Customer coordinator	Answers help desk calls and is the first line of troubleshooting for users having equipment, software or password issues.

| Operational Applications Administrator | Processes all Banner security requests, processes print jobs, assists with automated job scheduling |

The majority of projects completed by this team relate to the support of Banner applications and integrations, the support of the user base for Banner and first line support to all users.   There is an outsourced 7 x 24, 365 day per year Help Desk that is managed by CCCOnline. This Help Desk provides support in conjunction with the System IT Help Desk and the colleges' Help Desks. Primary customers are students but the 7 x 24 Help Desk is available for faculty, instructors and staff especially during off business hours.

Network and Cyber Security

The Network and Cyber Security group is comprised of a working manager, and a Network Security Administrator. This group is responsible for all Cyber Security training for the System office and the colleges, creation and maintenance of cyber security procedures, security configuration and monitoring for all enterprise applications, Internet security, VPN, Multifactor Authentication and managing the third party 24x7 security operations center. This group provides support for all cyber security issues for System IT and local college IT. These are professional staff members, having significant experience and expertise with the technology that they support.

Position	Area(s) of Responsibility
Manager Information Security	Oversees all functions of this group as well is a working manager supporting key functional operations of the cyber security functions of the CCCS System.
Network Security Admin	Responsible for: daily monitoring of cyber security monitoring, VPN administration, multifactor authentication, firewall management and monitoring.

Select Achievements for FY22 – all of these projects, except DR/BC were collaborations with college IT Departments

- Migrated all colleges, students and system office to a single Microsoft O365 tenant – allows for improved cyber security for the Office 365 environment and positions that environment for Colorado Online and provides enhanced capabilities for sharing and collaboration across the system and with faculty and students
- Migration of on-premise Exchange email to O365 (Cloud), allows for better integration with other Microsoft cloud applications and improved security for email
- Revamped the Disaster Recovery/Business Continuity to new hardware and configuration allowing for faster failover and recovery and automation of many failover processes, reducing time required to failover and reducing human error
- Migration of college and system office call centers to a cloud environment, enhances capabilities and college ability to manage call queues, messages and other features
- Deployed Multi-Factor Authentication (MFA) across the system for all employees, provides improved login protection and cyber threat avoidance