



2022-2024

Kern Community College District

District Office Administrative Unit Review

Information Technology

Enter Name: Gary Moser

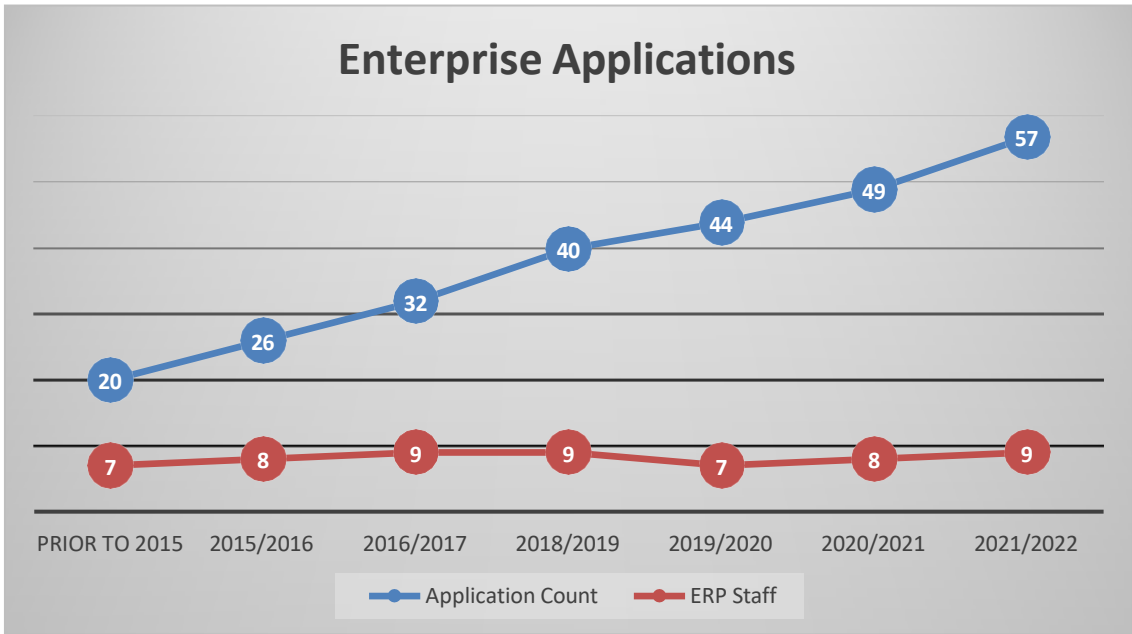
Enter Title: VC IT\CIO

Submitted by: Gary Moser

Executive Summary

a) In one paragraph or with bullet points, summarize the key points learned in this evaluation. *[list the highlights of the document]*

- To support the district effectively, newer technology must be used to move us from a maintenance focus toward a service-based organization. To accomplish this, our plan remains a “Cloud First” solution for our technology. This is critical in effectively serving our students and colleges.
- The new enrollment, student success, and equity initiatives for the district will need to be planned, designed, implemented, and supported.
- The DO IT staff is very dedicated and talented as we continue with transitioning to newer technologies such as Software as a Service (SaaS). Challenges remain trying to recruit and retain talented technology staff
- The relationship between the District Office IT and the Colleges IT departments is a strength in supporting our students, faculty, and staff.
- Enterprise Applications has a significant and constantly increasing workload for technology due to growth of new requirements, projects, customizations, grants, and state projects. Resources to support current and projected growth needs to be addressed. Key indicators are:
 - Technology **Applications growth** (19 to 49) since 2014 **increased by 300%**. This past year alone increased by 14%.
 - Applications approved and in work will increase growth to 57 this coming year.
- Resource constraints inhibit research and development efforts for newer technology that would enhance our ability to address student and staff needs for requested systems and applications district wide as evidenced by the significant backlog of new and increasing requirements.
- Data Warehouse staff is needed to support the growth of Institutional Research staff district wide. Each college now has an IR office with data requirements, reporting, and information needs. The current staffing level in place was designed for only a district IR department.
- Technology project management to support current and future technology increases\changes is being setup in the district. The design, planning, and coordination of complex and multiyear projects to support new\expanding requirements includes many objectives such as guided pathways, new technology development and implementation, and state applications.
- There are some systems that have a significant amount of functionality duplication and significant levels of customizations all impacting service.
- The IT Security program for our district is in progress. A significant amount of work needs to be done to help reduce threats, address cloud operations, compliance requirements, end user education, and security prevention techniques for our systems.
- Key committees are essential to support the colleges. These include IT Directors meetings, Vice Presidents meetings, and Banner Steering Committee. The communications and



Key indicators

Significant added initiatives will impact our service capabilities beyond Enrollment, Student Success, and Equity

Enterprise Applications staffing levels only up by 14% to offset a 300% applications increase over past six years

No additional staff are funded for past growth and new requests continue from all areas of the district.

The most critical area in supporting the colleges and district office needs is our Enterprise Applications section. This area has experienced significant growth in applications district wide as shown below. New applications requested for this year are increasing within the district. With current staffing levels not able to support the growth over the past 5 years and new applications being requested current and future systems are at extreme risk. Key positions needed to support students, the colleges and the district office are Enterprise Resources Analyst, System Support Analyst, and Project Manager.

Work ongoing to support each Application

- Daily Monitoring
- Updates\patches
- Process review and improvement
- Integrations with other systems
- Network configuration and performance
- Backup of systems
- Disaster Recovery\BCP
- Security
- Training
- User modifications
- Single sign on
- Test sites built and maintained
- New version implementations
- Project management
- Helpdesk support
- Vendor contracts
- PO's\Invoices
- New technology change analysis

Future Directions of the Unit

a) Provide a brief abstract of synopsis of your unit's current circumstances and future needs. Please include any college priorities that affect your unit, and the connection to college planning and priorities.

Our focus is supporting our districts enrollment, student success, and equity initiatives. This focus' IT's efforts on delivering the solutions as was shared to district-wide leadership of specific projects, objectives and goals.

The IT unit continues its efforts to enhance, explore, secure and implement systems and applications to address our colleges educational and business goals through the use of advanced technologies focusing on "cloud first" solutions. Planning, designing, and implementing the automation of processes will be essential in addressing and expanding applications to meet all our college's pending requests.

Technology evolution, change, and growth are constant and our cloud focus is essential to support the colleges. Our cloud solutions and standardizations objectives for efficiencies and cost containment are paramount goals and our recent solutions having seen results.

The impact of the pandemic has caused a significant shift in priorities to support our students and colleges in a remote environment. IT is continuing our adjustment to remote solutions and technologies. Focus is providing students with remote access to course technology and addressing security of our systems.

We will continue to support the initiatives in technology that will help provide solutions that are supportive of our KCCD students. Key initiatives include Data Warehouse, Guided Pathways, 4CIS has grown to 5 districts developing a statewide cloud-based ERP solution (approved by the Board), etc.

The hiring\retraining of technically qualified staff to support new technology research and development for our college's needs is essential to success. IT and HR have worked together to implement a district Telecommuting procedure to attract out of area talent to help address staffing shortfalls. Having appropriate IT staffing levels with appropriate skills will allow us to increase our districts efficiencies allowing KCCD staff to focus on students and address continuous growth by developing the next generation technologies in parallel.

Competition from other educational institutions and external pressures from private sector are creating vacancies in our technology staff due to salary levels and flexibility of remote working options, etc. Out of state staffing options would help oblivate hiring and talent shortfalls

The primary goals that need to be addressed are as follows:

- o Enrollment, Student Success, and Equity initiatives
- o Cloud adoption continues in our technology portfolio
- o Supporting remote education and employees
- o MIS reporting processes continue to be updated in coordination with IR
- o Address critical positions staffing levels and training
- o Project management processes formalized with district wide rollout
- o Communications process enhancements
- o A stable and agile technology environment
- o Security will be a continuous and concerning challenge
- o Renewed emphasis on ADA requirements will draw on limited recourses

Section One: Unit Overview

a) What is the purpose of the unit and what populations (internal and external) are served by the unit? *[why does the unit exist and how does the unit support the mission and vision of the Kern Community College District; who benefits directly from the services provided by the unit]*

Information Technology is committed to serving our students, faculty, staff, administrators, the Chancellor, Board of Trustees and the general public by providing technology related support to each of the Colleges and District Office. By providing a myriad of essential technology functions, including those specific to Enterprise Applications, Infrastructure, Security, Enterprise Project Management, Research and Development, Technology Policies and Procedures, and Enterprise Applications training district technology is an enabler of solutions. The District Office of Information Technology will continue to be a leader in technology, an integral partner in creating and delivering innovative solutions and effective IT services, and a proponent of cooperative working relationships. In our role as an exemplary educational leader, serving to strengthen our community, faculty, and staff to create an environment for life-long learning utilizing modern technology.

Technology is often the first point of contact for potential students for our colleges. In this current pandemic there is even more of an impact to support our students and faculty in our new remote world.

Populations Served:

- Students (via Website/Portal, Banner, Canvas, Help Desk, Wireless, AWS AppStream Remote access)
- Employees/Internal Departments that rely on our systems (HR, Finance, Financial Aid, Legal, Foundation, Admissions & Records, Counseling, etc.)
- Employees/Internal Departments that rely on our infrastructure (nearly all)
- State and Federal Reporting Agencies (to whom we report to. Example: MIS, FA data to DoE, etc.)
- Vendors, Guests, etc. (who sometimes need data from our systems, access to Wi-Fi when they visit, etc.)

b) Describe how the unit supports the colleges in achieving their mission and their efforts to improve student learning and achievement.

District Office IT Main Areas of Responsibility

9/22/21

Chief Information Officer
Gary Moser

- IT Leadership (Strategy, Vision, Planning)
- IT Governance
- Alignment of district systems
- State initiatives
- Campus Relationships
- IT Finance and Asset Management
- IT Project Portfolio Management
- Grant Review
- Contracts/Board-Docs Review
- Facilitate/Coordinate Instructional Technology Initiatives and Standards
- Policies and procedures

Administrative Assistant
Cynthia Munoz

Administrative Assistant
Mayra Reyes-Bonilla

- Administrative support for IT Management Team
- Budget tracking
- PO, Invoice processing
- Coordinate Travel
- Committee Support

Director of IT Security (K)
Vacant

- Assessment - Risks, Threats, Technologies
- Security Strategy
- Incident Response
- Security Plan, Policies and Procedures
- Monitoring and compliance
- Security Awareness Program
- Identity and Access Management
- Single Sign-on

Director of Enterprise Apps (I)
Dave Barnett

- Enterprise Application Strategy
- Cloud Applications
- Web
- Content Management
- Degree Works
- Data Warehouse & Reporting
- EAB
- Starfish, Campus Logic
- Mobile
- Portal
- Document Management/Imaging
- Cloud Apps (LMS, Academic Works, ASAP, etc.)
- Disaster Recovery
- Business Continuity

Associate Director of Enterprise Apps (I)
Stephen Kegley

- Banner
- Banner Integrations
- Database Administration
- MIS Reporting
- J-Point
- Class Climate
- CCC Apply

Director of IT Infrastructure (I)
Eddie Alvarado

- Networks (LAN, WAN)
- Cloud Network Systems
- Systems (Servers, Storage, AD-Exchange, Backups, etc.)
- Telecom (Communications)
- Security Operations (Firewall, DDOS, A/V, etc.)
- Video Conferencing
- Data Center
- App Support (Quicken, Sage, EMS, etc.)
- Disaster Recovery
- Business Continuity
- Remote Access
- Network Wi-Fi

IT Customer Support Manager (G)
Hernando Mondragon

- End-User Support
- Help Desk (Blackboard)
- Local Help Desk
- IT Professional Development
- DO Onsite Tech Support
- End-User computing standardization
- Remote access support

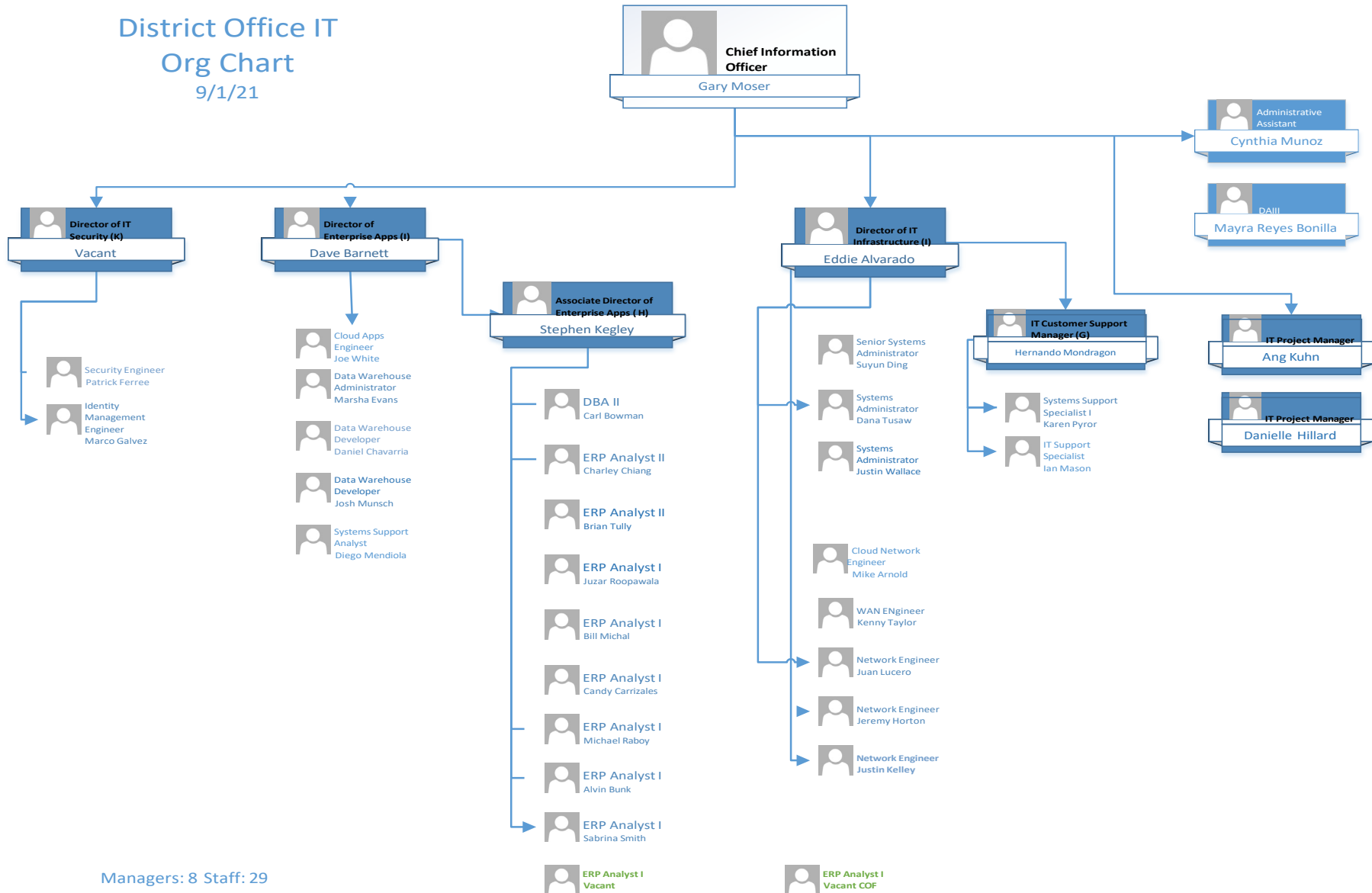
IT Enterprise Project Manager (G)
Ang Kuhn – Danielle Hillard

- Project Planning
- Project Coordination
- Project Risk Mgmt
- Communications
- Project Mgmt Training
- Project scheduling
- Stakeholder engagement
- Risk management
- Project Intake

Section One: Unit Overview *continued*

c) How is the unit structured within the district? Modify the org chart template below to illustrate the unit's organization.

District Office IT
Org Chart
9/1/21



Section One: Unit Overview *(continued)*

d) For the positions included in the unit's organizational chart, please provide a brief description of what primary processes or areas each position is responsible for as it relates to the work of the unit, district and colleges.

Position	Primary Functions/Processes	Supplemental Functions/Processes	Additional notes
Director of IT Infrastructure	Oversee/Manage: Cloud Infrastructure including remote application delivery Helpdesk Operations Local Site Networks (LAN and Wi-Fi) Site-to-Site Network Connections (WAN) and Internet Access Telephone Systems, Mass Notification Servers/Systems/Storage(SANs) Microsoft Technologies (Office 365) <ul style="list-style-type: none"> - Active Directory - Email - SharePoint - OneDrive - Teams Backend Video Conferencing		
IT Customer Support Manager	<ul style="list-style-type: none"> - Oversee the delivery of effective IT Help Desk Services (HDS) for students, faculty, and staff throughout KCCD. - Manage Desktop Support services for KCCD's District Office location, including the supervision of staff assigned to this position. - Establish, communicate and monitor IT support service level agreements (SLAs). - Set, track and report key support performance metrics for Help Desk services. - Negotiate, execute, audit, monitor and measure services provider contract(s) - Coordinate implementation of applicable industry best practice support frameworks 		Annual # of Help Desk Calls: 12,000 District Office PCs: 100 District Office Conf Rooms: 11 Labs/Classrooms Supported: 13

	<ul style="list-style-type: none"> - Participate in the development and communication of a District Wide IT services portfolio. - Manage budgets associated with the IT HDS operation. - Perform other duties as assigned by the Director, IT Infrastructure. 		
Network Engineer (Qty 3)	<ul style="list-style-type: none"> - Infrastructure for new KCCD sites (i.e. BC SW) - District Wide Network Switches - District Wide Wi-Fi networks - District Wide Network Closet Power (UPS, PDUs) - Telephone and Voicemail Systems (including carrier services from AT&T, Spectrum, Frontier and others...) - Telephone Bills Management (District Wide) - Mass Notifications systems - Backend Video Surveillance Systems (Server, Storage) - Backend Door Lock systems and support coordination 		<p>Network Switches: 255 Wi-Fi Access Points: 556 Wi-Fi Controllers: 14 (See Attached Diagram – in same Directory)</p> <p>Telephone Switches: 35 Telephones: 1700 Security Cameras: 200 Telecom Carriers: 7</p>
WAN Engineer	<ul style="list-style-type: none"> - KCCD Site-to-Site Connections (Primary and Failover) - Internet Access for all KCCD Sites - KCCD Data Center Environmental (Power, HVAC, Fire Suppression, etc.) - Backend Video Conf Systems and support for campus Video Conf rooms. 		<p>Sites: 11 Network Routers: 18 (See Attached Diagram – in same Directory)</p> <p>Video Conf Rooms: 25</p>
Cloud Infrastructure Engineer	<ul style="list-style-type: none"> - Senior/Team lead for Networking group - Cloud Networks for Amazon Web Services (AWS) Cloud environment - Cloud Security Infrastructure for AWS 		
Senior Systems Administrator	<ul style="list-style-type: none"> - Senior/Team lead for Systems Admin group - Lead and coordination for Cloud Systems Migrations - AWS Cloud Costs Management - AWS Cloud Backup/DR - On-Premise Data Backup - On-Premise Storage Systems - On-Premise Virtual Server Systems (new, upgrades, patching) - Campus Support (Servers/Storage) 		<p>Servers on Premise: 360 Servers/Apps in the Cloud: 60 Total Storage: 450TB</p>

<p>Systems Administrator (2)</p>	<ul style="list-style-type: none"> - Server (Windows/Linux) management - Microsoft Infrastructure Technologies (Active Directory, DNS, etc.) - Microsoft Cloud (O365) for Email, SharePoint and other Collaboration tools - Email Backup and Security - Cloud Migrations and Support - Campus Support on Microsoft Technologies - Microsoft licensing - Software Deployment - Listservs - Security Remediation - Systems Monitoring - Misc App support (Abila, Quickien, Abacus Law, SARS, etc...) 		<p>Employee Email Accounts: 5400</p> <p>SharePoint Sites: 165</p> <p>Student Email Accounts: Approximately 40,000</p> <p>Email Lists (listservs): 525</p> <p>Misc Applications: Approximately 30</p>
<p>IT Support Specialist</p>	<ul style="list-style-type: none"> - Server Management - Campus Support on Microsoft Technologies - PC and Laptop management (Onsite and Remote) - Remote Application Delivery Support - Receive, prioritize, and respond to Help Desk Services requests - Diagnose and troubleshoot PC/Laptop related software and hardware problems. - Develop, optimize, and deploy, OS images and software packages to District Office computers. - Liaison between Tier-1 support provide and KCCD IT support teams 		
<p>Systems Support Specialist I</p>	<ul style="list-style-type: none"> - Receive, prioritize, and respond to Help Desk Service requests. - Diagnose and troubleshoot PC related software and hardware problems. - Hardware and software adds, moves, and changes. - Log details of support provided in Help Desk trouble-ticketing system. - Assist and train users in the use of District hardware and software. 		

	<ul style="list-style-type: none"> - Develop, optimize, and deploy, OS images and software packages to District Office computers. - Assist with the installation, configuration, and support of network (wired, WIFI) equipment, servers, and telecom systems. - Maintain hardware replacement planning information to assist with the replacement and/or upgrading of desktop, laptop, printer and related technology assets. - Work toward maintaining established Help Desk performance metrics (SLAs) 		
Director of IT Security	<ul style="list-style-type: none"> - Oversee district IT security program. Evaluate and implement security standards. - Manage IT security operations & incident response. - Review/draft IT policies related to security, acceptable use, and accessibility. - Review vendor contracts and security requirements. 	<p>Provide security support to IT and other departments as needed.</p> <p>Plans and conducts IT security awareness training.</p>	
Security Engineer	<ul style="list-style-type: none"> - Provide hands-on security engineering for IT projects. - Administer firewalls, anti-virus, etc. - Technical lead on security projects. - Responsible for security vulnerability assessments and working with other IT teams to remediate findings. 	<p>Reviews/validates security controls for new IT projects.</p> <p>Technical lead for security incident response.</p>	
Security Specialist	<ul style="list-style-type: none"> - Technical lead on SSO/IAM projects. - Respond to security incidents involving compromised accounts. - Respond to tickets related to accounts and SSO. 	<p>Assist with wide range of IT security functions.</p>	
Director, Enterprise Applications	<ul style="list-style-type: none"> - Enterprise Application Strategy - Interfacing with VPs - Reporting Coordination - Data Warehouse - Web sites - Applications and systems analysis and recommendations 	<p>Budgeting</p> <p>General Employee Supervision</p> <p>Evaluating Systems / Integrations</p>	

		System Down Communication / Management	
Associate Director, Enterprise Applications	<ul style="list-style-type: none"> - Ellucian Cloud Operations - Ellucian Upgrade Coordination - ERP Team - Interfacing with Director Groups 	ERP Budgeting General Employee Supervision Evaluating Systems / Integrations System Down Communication / Management	
ERP Analyst I/II DBA II	<ul style="list-style-type: none"> - ERP Technical Support: - Banner General - Banner Student - Banner Finance - Banner HR - Banner Accounts Receivable - Banner SSO Manager - Banner Self-Service 8.x - Banner Self-Service 9.x - Banner Document Imaging - KCCD Customizations - Ancillary App Technical Support and Integration: - DegreeWorks - TD Client - FormFusion & Intellicheck - Class Climate - Schedule Plus - Payment Gateway - OnBase Document Imaging - SalePoint - Integration/Automation: - AcademicWorks - Library Systems - SARS - Maxient 	Support of the following includes: Data Analysis/Advising Report Writing State/Federal Reporting (MIS, NSC, etc.) System Admin Duties Documentation Technical Testing Assist with Business Process Automation New System Analysis/Estimates Data Security Permissions Accessibility Requests Documentation	

	<ul style="list-style-type: none"> - Canvas - Interim Portal - AccuSQL - eTranscripts - Credentials Inc - Barnes & Noble - eLumen - EAB Navigate / Advise - Blackboard Connect (Emergency Texting) - Blackbord Help Desk - Rydin Parking System - ASAP (registration system for Levan Institute + D. Teasedale's area) - Campus Logic - Starfish (4 main components) - Student Portal - ShorTel/Mytel Phone System - AACMS - ComEvo - Banking Integrations/Student Check Reconciliation - BankMobile - CalCard - FacilitySoft - OpenGov - CCCApply - Accuplacer 		
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Systems Support Analyst	<ul style="list-style-type: none"> - Assist with lower level technical support for the systems above, specifically: - Canvas - Onmi Website CMS - CRM Recruit 	Documentation User Support Report Writing Running Scripts	
Data Warehouse Developer/Admin	<ul style="list-style-type: none"> - ETL development - Function Writing - IR Support - Data Imports - Technical Support: - Cognos - ODS - Oracle Data Integrator 	Report Writing Data Imports Structures Performance Support Access Requests Security Documentation Data Freezes	
Cloud Applications Engineer	<ul style="list-style-type: none"> - AWS Cloud Application Architecture - Research and Development - Web Development Lead and Websites Mgmt\Support - System Integrations with Web Sites 	Content Editing Troubleshooting Documentation. Custom Web Dev.	DO Content Support Design Documentation
Enterprise IT Project Management	<ul style="list-style-type: none"> - Develop district wide project management process - Project intake and scheduling - Project communications - Project coordination with functional and technical teams - Lead project teams to ensure new products/services are delivered on time, within scope, and on budget - Communicate project progress to all stakeholders - Coordinate project activities with appropriate stakeholders - Identify, prioritize, and mitigate project risks - Manage and monitor project budgets - Establish standards and procedures for project management within Information Technology - Develop project documentation throughout the project lifecycle to ensure accurate and updated information is shared with stakeholders - Remove barriers for the project team to complete project work and meet deadlines 	Status reporting Project tracking Documentation Training Project Intake Portfolio Planning Develop PM standards for IT	District wide coordination and communications Approximately 45 large projects are in progress <ul style="list-style-type: none"> • Enterprise Apps: 20 • Infrastructure: 18 • Security: 7

Section Two: Administrative Unit Outcomes (AUOs)

a) List all the AUOs for the unit. AUOs describe what a customer or end-user will understand, experience or obtain as a result of the service the unit provides to the colleges and other internal stakeholders. Describe the method of assessment and the criteria used to determine success in the service provided. The assessment method should include some way of measuring college, internal or external stakeholders' demand or need for and satisfaction with the service (add additional rows as necessary.)

Administrative Unit Outcomes (AUOs)	Strategic Plan Alignment	Review Period	Method of Assessment	Outcome or Desired Outcome
<p>1. Applications</p> <p>Applications meet availability reflected by annual standards.</p> <p>Applications are updated and meet version requirements.</p> <p>Meets Federal and State compliance requirements.</p> <p>Applications and integrations are supported and available</p>	<p>Goal 6 – Strengthen Organizational Effectiveness</p>	<p>2022-2024</p>	<p>Annual Metrics</p> <ul style="list-style-type: none"> a. Application Uptime b. Upgrade/Patch Quantity & Dates c. Regulatory Data Submission Dates <p>Integrations</p>	<p>Application uptime reflects annual standard of 99%.</p> <p>Meets current update and version requirements for applications.</p> <p>Federal and State Compliance requirements are current.</p> <p>Integrations are maintained and accessible</p>

<p>2. Infrastructure</p> <p>Network uptime reflects our annual standards</p> <p>System uptime reflects our annual standards</p> <p>Systems and network meet update and compliance requirements.</p> <p>Helpdesk tickets are resolved in a timely fashion</p>	<p>Goal 6- Strengthen Organizational effectiveness</p>	<p>2022-2024</p>	<p>Annual metrics</p> <ul style="list-style-type: none"> a) Network up-time b) Systems up-time c) Upgrade\Patch completed d) Helpdesk calls received\resolved timeline 	<p>Network uptime reflects our annual standards of 99%.</p> <p>System uptime reflects our annual standards of 99%.</p> <p>Meets current update and version requirements for applications.</p> <p>Helpdesk call resolution meets industry standards</p>
<p>3. Security</p> <p>Security audits and remediation are coordinated district wide</p> <p>User security training programs are provided</p> <p>Implementation/currency of BPs, APs, and/or internal procedures</p> <p>Security standards are provided for technology</p>	<p>Goal 6 – Strengthen Organizational Effectiveness</p>	<p>2022-2024</p>	<p>Annual Metrics</p> <ul style="list-style-type: none"> a) Avg # of High/Critical vulnerabilities > 90 days old b) Avg # of High/Critical vulnerabilities outstanding c) Percentage of staff who have received awareness training d) Current BP\AP\Procedures e) Applicable NIST standards followed 	<p>District wide audit and remediation completed.</p> <p>Up to date and effective training programs are provided.</p> <p>Up-to-date BPs, APs, and/or internal procedures</p> <p>Standards are updated and applied.</p>

<p>4. Project management</p> <p>Provide an effective technology project management process.</p> <p>Provide a project portfolio scheduling process</p> <p>Provide a transparent and timely project reporting process.</p>	<p>Goal 6- Strengthen Organizational effectiveness</p>	<p>2022-2024</p>	<p>A submission process for new technology related requests</p> <p>Project completed within estimated time requirements.</p> <p>Project completed within budget estimates.</p> <p>A cost/benefit analysis process for submission of new systems and applications.</p>	<p>Provide an effective technology project process.</p> <p>Projects are completed on time and within budget</p> <p>Accurate and timely project reporting and status updates.</p>
<p>5. Strategic planning</p> <p>Provide for new\innovative technology solutions.</p> <p>Develop a proactive research and development process</p> <p>Update Technology Planning to support new initiatives</p>	<p>Goal 6- Strengthen Organizational effectiveness</p>	<p>2022-2024</p>	<p>Leadership and Advisory Committees feedback</p> <p>Review proposed new systems and applications to meet district technology needs.</p> <p>Assess requirements and future technology requests and work with stakeholders to determine solutions.</p>	<p>A Process for district stakeholders in submission of technology recommendations.</p> <p>Increased functional\technical process improvements</p> <p>Accurate and timely reporting to district stakeholders.</p>

b) Summarize the results from any AUOs evaluated during the past year, including feedback on services rendered during the past year. Provide details regarding findings and plans for change or improvement of service, if needed.

Systems and applications have maintained the availability goals

A project management office was setup and processes are being developed and implemented in spring 2021. Regular meetings with technology committees to assess IT status and improve communications have been implemented through VP meetings.

We track vulnerability scanning results and communicate them out to the appropriate IT teams. We provide online security awareness training and some in-person training. We have drafted new APs and BPs for acceptable use, security, and privacy to update policies. We have established and implemented new security standards for cloud/AWS and are moving toward using NIST standards for our overall security program.

Section Three: Key Performance Indicators (KPIs)

a) List the KPIs for the unit along with the relevant outcomes for the last 3-5 years. KPI data tracks process efficiency and demand for services. Examples of KPIs include a count of customers served, a count of services performed, the average time to complete a service, etc. They are closely related to the AUOs and should reflect the unit's core function or purpose.

Key Performance Indicators (KPIs)	2016-17	2017-18	2018-19	2019-20	2020-21
myBanWeb Uptime	99.95%	99.95%	99.85%	99.97%	99.98%
www (bc,cc,pc,do) website uptime	>99.999%	>99.999%	>99.999%	>99.999%	>99.999%
Applications implemented past 6 years – (2014 count was 19)	36	44	45	43	57
FTES Growth over 5 years – affects all systems, networks, applications district wide.	5.21%	5.58%	7.74%	-1.24%	-1.24%
% of Staff who have received security awareness training.	N/A	9.2% Online	9.6% Online	10.8 %	10.8 %
Average # of outstanding High/Critical vulnerabilities	N/A	326 High	120 H\40 C	216 H\59 C	216 H\59 C
Average # of High/Critical vulnerabilities > 90 days old	N/A	275 High	168 High	135 H\16 C	135 H\16 C
Help Desk – Tier 1: Average speed to answer initial phone call	90% <= 90sec	90% <= 90sec	88%	92%	91%
Help Desk – Tier 1: Average post call random survey scores (scale 1 to 5)	4	4	4.2	4.4	4.5
Help Desk – Tier 1: First Call Resolution Rate	80%	80%	69%	77%	79.5%
Network Uptime	99.9%	99.9%	99.9%	99.9%	99.9%
Systems/Server Uptime	99.9%	99.9%	99.9%	99.9%	99.9%
Key IT systems/services deployed to the Cloud (non-Banner)	N/A	N/A	N/A	20	20
Project Completion Rate					
Total IT & Functional Hours per Project					
Number of Change Orders per Project					
Number of Project Requests per Year					
Budget Variance					

b) What unexpected changes or challenges did your unit encounter this cycle? How does your trend data impact your decision-making process for your unit?

COVID-19 increased demand for IT services, specifically on network/vpn/remote access/support side of the house, New security processes and challenges are also being researched and implemented. Also, there have been impacts on the Applications side of the house as we make changes to better operate in this new environment.

Attracting and hiring highly skilled IT staff concerns prevented us from replacing vacancies and dramatically affected the Enterprise Applications team as their size has been reduced by 22%. Staffing levels decreased as some found other employment due to higher pay, remote work options, etc.

The information systems growth in the district continues to require resources due to changes in projects, grants, state decisions, etc. The intention is to show that there has been a significant increase in demand for IT services and solutions. This includes research & development, user planning & project management, implementation of new applications and services, grant & categorical requests, and increasing ongoing maintenance of added systems.

Section Four: Progress on Unit Goals

a) **List the unit's current goals.** For each goal, discuss progress and changes. Provide an action plan for each goal that gives the steps to completing the goal and the timeline. If unit goal is for service to a group outside of the unit, indicate which group in the last column. (Add additional rows as necessary.)

Unit Goal	Which institutional goals from the KCCD Strategic Plan will be advanced upon completion of this goal?	Progress on goal achievement (choose one)	Status Update — Action Plan	Colleges requesting accomplishment of this goal or colleges' planning indicating this need. (Include supporting documentation.)	Other group (besides ones of the colleges) requesting accomplishment of this goal. (Include supporting documentation.)
WAN Failover Add VPN failover capability to CC-IWV, CC-Bishop and CC-Mammoth	4,6	<input type="checkbox"/> Completed: _____ (Date) <input checked="" type="checkbox"/> Revised: _____ (Date) <input type="checkbox"/> Ongoing: _____ (Date)	Partially Complete. IWV Done. CC-Bishop and CC-Mammoth in progress.	All	
WAN Capacity Increases Complete Phase 1 connection upgrades as approved/funded by CCCC	4,6	<input checked="" type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input type="checkbox"/> Ongoing: _____ (Date)	CCCC funding provided for upgrading PC WAN connection. Project completed Summer 2021	All	
Outdoor Wi-Fi Continue implementation as prioritized by the Colleges. This goal spans multiple years.	1,4,6	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	Design and Engineering complete. Implementation ongoing. Key projects completed: CC-IWV CC-Tehachapi PC	All	Bond (BC), Other sites (DO IT GUI)
Emergency Communications Finish phone deployments and implement integrated system.	4,6	<input checked="" type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input type="checkbox"/> Ongoing: _____ (Date)	New Phone Deployments and client software deployment completed. Integrated systems installed and ready for testing/deployment at all sites as of Oct 2021.		Risk Management

<p>Cloud Application Streaming</p> <p>Expand modern cloud-based application streaming services. Retire legacy remote access systems.</p>	<p>1,6</p>	<p><input checked="" type="checkbox"/> Completed: _____ (Date)</p> <p><input type="checkbox"/> Revised: _____ (Date)</p> <p><input type="checkbox"/> Ongoing: _____ (Date)</p>	<p>Cloud based remote access to Banner, related application and file repositories provided to approximately 700 users in Oct 2021. New goal will be established for additional power user requirements (i.e. additional applications)</p>	<p>All</p>	
<p>Collaboration Tools Deployment</p> <p>Roll-out Microsoft Teams chat/meeting/file sharing collaboration software</p>	<p>6</p>	<p><input checked="" type="checkbox"/> Completed: _ Oct 2021__ (Date)</p> <p><input type="checkbox"/> Revised: _____ (Date)</p> <p><input type="checkbox"/> Ongoing: _____ (Date)</p>	<p>Replacement of Skype and enhanced communications.</p>		
<p>Help Desk:</p> <p>Increase first- call resolution to more than 70%</p> <p>Increase customer Help Desk interactions by 10%</p>	<p>3,6</p>	<p><input type="checkbox"/> Completed: _____ (Date)</p> <p><input type="checkbox"/> Revised: _____ (Date)</p> <p><input checked="" type="checkbox"/> Ongoing: _____ (Date)</p>	<p>First-call resolution rate increased by 8% to the current level of 77%.</p> <p>Help Desk cases actually decreased by about 9% (from 14,882 cases in 2018/2019 to 13,588 cases. In 2019/2020. Likely due to converting to remote work mid-March and majority of support through by other means, such as email and instant messaging via Skype and Teams.</p>	<p>IT Directors</p>	<p>DO IT Directors</p>
<p>Increase remote device management capabilities</p> <p>Improve/Streamline Device management (Patching, Security)</p>	<p>6</p>	<p><input checked="" type="checkbox"/> Completed: _ June 2021__ (Date)</p> <p><input type="checkbox"/> Revised: _____ (Date)</p> <p><input type="checkbox"/> Ongoing: _____ (Date)</p>	<p>Accomplished ability to windows OS patch and apply changes to remote devices.</p>	<p>All</p>	<p>DO IT Directors</p>

for supporting remote workforce. (InTune)					
Cloud Migration WAVE 2 Complete WAVE 2 (20/21) of application migrations to the Cloud (Amazon Web Services)	1, 6	<input checked="" type="checkbox"/> Completed: _ July 2021____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input type="checkbox"/> Ongoing: _____ (Date)	Applications slated for migration in 20/21 were completed.		
Maintain Hardware Replacement Planning across all areas Analyze, Plan, Budget and Replace core IT Infrastructure over multi- year period.	6	<input type="checkbox"/> Completed: _ ____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	Planning for 20/21 maintained and utilized to replace necessary infrastructure.		
Implement district security program plan	6	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	Cyber Security Incident Response Plan has been established. Ongoing effort to		DO IT Security
Comprehensive security policies and standards	6	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	We have proposed comprehensive standards and implemented cloud security standards.		DO IT Security
Implement endpoint security monitoring	6	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	Deployed CrowdStrike and continue to monitor tool and protect endpoint devices.		DO IT Security

Implement IdM\ SSO application	6	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	Complete 106 system Intergrations, continue to maintain and integrate new systems”		DO IT Security
Implement Banner 9 NGS – in the cloud	6	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	The project is underway and working with functional teams for validation, review, and testing		
Implement District Data Warehouse Project.	6	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	Remaining items from Phase 1, 2, and 3 have been rolled into a new Phase 4 expected to be complete by the end of the fiscal year.	Bakersfield College	DO IR Department
Banner 9 – Phase 3 – SSB	6	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	SSB installed March 2019, still in testing/validation		DO IT Systems Maintenance
Updates/ITIL/etc.			stage. SSB 9 registration is scheduled go-live in Feb 2022 based on testing and planning with the colleges		
Banner Standardization	6	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	Banner standardization has been integrated into the Ellucian Open SaaS project. Mod-conversion meetings have been conducted to review all non-standard Banner process these are being re-architected to meet Open SaaS standards.		DO IT Systems Maintenance
Document Imaging	6	<input checked="" type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input type="checkbox"/> Ongoing: _____ (Date)	The document imaging is complete. Some legacy scanning activity is being completed.		DO IT Systems Maintenance

DegreeWorks Upgrade	#6	<input checked="" type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input type="checkbox"/> Ongoing: _____ (Date)	The DegreeWorks upgrade is complete.		
Banner Open SaaS	#6	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	A full analysis of the existing Banner customizations has been completed. The next phase, which has begun, requires customized processes and processes to be re-architected to comply with Open SaaS standards.		

Section Five: New or Revised Goals

a) List new or revised goals, if applicable. (Add additional rows as necessary.)

Replacement Goal	Which institutional goals from the KCCD Strategic Plan will be advanced upon completion of this goal?	Status Update — Action Plan	Colleges requesting accomplishment of this goal or colleges' planning indicating this need. (Include supporting documentation.)	Other group (besides ones of the colleges) requesting accomplishment of this goal. (Include supporting documentation.)
WAN Failover	4, 6	Add VPN failover capability to CC-IWV, CC-Bishop and CC-Mammoth Jan 2023 Update: IWV and Mammoth Complete.	ALL	
Files to Cloud	1,6	Scope, Plan, Start implementation of project to move user (employee, student) files from on-premise IT infrastructure to the Cloud (M365)	ALL	
Telephone System Replacement	1,6	Carry-out research and evaluation process to determine replacement Telephone system. Actual implementation will extend beyond 2024		
Cloud Migrations WAVE 3	1, 6	Continue WAVE 2 of application migrations to the Cloud (Amazon Web Services) Jan 2023 Update: Goal Complete	ALL	

Outdoor Wi-Fi	1, 4, 6	Continue implementation as prioritized by the Colleges. This goal spans multiple years.	ALL	
Remote access upgrades	6	Upgrade our remote access applications to support students, faculty, and staff	ALL	
Cloud Application Streaming	1, 6	Expand modern cloud-based application streaming services. Retire legacy remote access systems.	ALL	
Collaboration Tools Deployment	6	Roll-out Microsoft Teams chat/meeting/file sharing collaboration software Jan 2023 Update: Goal Complete	ALL	

Increase remote device management capabilities	6	Improve/Streamline Device management (Patching, Security) for supporting remote workforce. (InTune)	ALL	
Maintain Hardware Replacement Planning across all areas	6	Analyze, Plan, Budget and Replace core IT Infrastructure over multi- year period.	ALL	
Migrate to a new IdM\SSO System	6	We are in the process of migrating to Okta. Jan 2023 Update: Goal Complete	ALL	DO IT Security.
Cloud Security	6	Update policies and procedures for cloud security.	ALL	DO IT Security.
User Awareness Training	6	Establish a training program for new hires at DO, PC and CC. Program established at BC.	ALL	DO IT Security.
Banner 9 NGS SaaS upgrade	6	Plan in development and implementation of Banner 9 in the new cloud environment	BC, PC, CC	DO IT – systems maintenance
Document Imaging	6	A&R, FinAid, HR, Business Services live will share funding for scanning of historical documents	BC, PC, CC	DO HR, DO Business Services, DO Chancellor’s Office
DualEnroll.com	6	Expand this application to the other colleges and Banner integration. Enrollment, student success, and Equity	BC, PC, CC	
CRM Recruit	6	Implement this application at the colleges. Enrollment, student success, and Equity	BC, PC, CC	Chancellor’s Office

Experince Student Portal and Mobile solution	6	Implement this application for student portal and mobile solution. Enrollment, student success, and Equity	BC, PC, CC	DO IT – systems maintenance
TouchNet Cashiering	6	Modernize student account cashiering and provide a robust student account management application.	BC, PC, CC	Business Services, Admissions & Records
Winter Session	6	Develop Banner 9 solution for winter sessions. Enrollment, student success, and Equity	BC, PC, CC	
Banner 9 Multi-semester Registration	6	New Banner 9 feature to be setup. Enrollment, student success, and Equity	BC, PC, CC	
Web Redesign	6	Web site upgrade and features enhancements	BC, PC, CC	
Axiom Budget Software	6	Replace the de-supported and antiquated budget development tool with a modern and robust application. Improve the budget development process.	ALL	Business Services

Section Six: Current Unit Resources

- a) List the unit's current resource levels by outlining existing staff, listing (major) technology/equipment the unit uses, describing the space the unit occupies, and the unit's current budget.

Resources	Current Level		
Staffing (list current staffing levels)	Chief Information Officer	Database Administrator II	Data Warehouse Developer (2)
	Administrative Assistant	ERP Analyst II (2)	Data Warehouse Administrator
	DA III	ERP Analyst I (7)	Systems Support Analyst
	Director of IT Infrastructure	Cloud Infrastructure Engineer	WAN Engineer
	Director of Enterprise Applications	Cloud Applications Engineer	Network Engineer (3)
	Director of IT Security	Security Engineer	Senior Systems Administrator
	Associate Director of Enterprise Applications	Security Specialist	Systems Administrator (2)
	IT Customer Support Operations Manager	Systems Support Specialist I	
	Project Manager (2)	IT Support Specialist	
Technology / Equipment	Personal computers, printers, copiers, safes, servers, storage systems, network infrastructure, data center equipment and modular furniture		
Space / Facilities	Office located at the Weill Center		
Budget (Unrestricted) Total	\$	Notes (if any)	
1000 (Academic Salaries)	\$		
2000 (Classified Salaries)	\$ 4,022,949		
3000 (Employee Benefits)	\$ 2,169,327		
4000 (Supplies & Materials)	\$ 23,300		
5000 (Operating Expenses and Services)	\$ 6,901,384		
6000 (Capital Outlay)	\$ 1,113,500		
7000 (Other Outgo)	\$		
Budget (Unrestricted) Total	\$ 14,230,459		
Budget (Contract/Community Ed) Total	\$		

The budget increase from last year is due to the increase in requests for new IT applications, license increases, and related support costs:

1. Contractual cost increases, Wi-Fi Project – Outdoor, Cloud project, etc.
2. New Initiatives: Dual enroll, Course exchange, SSO\IdM, etc.
3. Labor costs

Section Seven: Resource Request Analysis

Discuss the impact of new resources your unit is requesting for next year's cycle that are in addition to what your unit currently has in this cycle. Indicate the expected cost along with the rationale. If a college is not requesting the new resource, leave the "College(s) requesting" column blank. Rank the proposals in order of their importance to the unit ("1" is most important; "5" is least important)

Resource Category	Resource Requested (Include Cost)	Discuss how the new resource will impact your unit's effectiveness in providing service to the colleges or other groups and what college planning reflects or suggests this need.	College(s) requesting this new resource to your unit. (Leave blank if no college requests the new resource.)	Rank
Positions: <i>Discuss the impact new and/or replacement management and/or staff will have on your unit's service to the colleges.</i>	<input checked="" type="checkbox"/> 1: Classified Staff <input checked="" type="checkbox"/> 2: Administrator 1. Deputy CIO (~165k) 2. Assoc. Director Ent. Apps (~140k) 3. Business Analysts - 5 (~332k) 4. Systems Admin (~81k) 5. Systems Support Analyst ~ (62k) 6. Cloud Infrastructure Engineer (~85) 7. Security Engineer ~ (83k) 8. Contracts Specialist (TBD)	<ul style="list-style-type: none"> • New enrollment, student success, and equity initiatives • District FTE & Systems Growth • Support colleges due to changing technology • Extensive backlog of requests & integrations for colleges • Research Data Warehouse & IR Staff Increase at all colleges • Staffing levels significantly lower compared with other like districts. • Increase in contracting requirements and compliance requirements • Increased operational reports are being requested. 		1
Professional Development: <i>Describe briefly, the effectiveness of the professional development your unit will be engaged in (either providing or attending) during the next cycle</i>	<input checked="" type="checkbox"/> 1: Provide Professional Development <input checked="" type="checkbox"/> 2: Attend Professional Development (~50k)	Increased turnover has resulted in 5 positions in the Enterprise Application area. We will need to train these new employees to effectively support their assigned areas.	Training provided to college staff as a direct result of new/ongoing projects and systems integration.	2
Facilities: <i>If your unit receives a building remodel or renovation, additional furniture or beyond routine maintenance, explain how this request or requests will impact your unit's service to the colleges.</i>	<input type="checkbox"/> 1: Space Allocation <input type="checkbox"/> 2: Renovation <input type="checkbox"/> 3: Furniture <input type="checkbox"/> 4: Other <input type="checkbox"/> 5: Beyond Routine Maintenance			

Discuss the impact of new resources your unit is requesting for next year's cycle that are in addition to what your unit currently has in this cycle. Indicate the expected cost along with the rationale. If a college is not requesting the new resource, leave the "College(s) requesting" column blank. Rank the proposals in order of their importance to the unit ("1" is most important; "5" is least important)

Resource Category	Resource Requested (Include Cost)	Discuss how the new resource will impact your unit's effectiveness in providing service to the colleges or other groups and what college planning reflects or suggests this need.	College(s) requesting this new resource to your unit. (Leave blank if no college requests the new resource.)	Rank
Technology: <i>If your unit receives technology (audio/visual – projectors, TV's, document cameras) and computers, , explain how this request or requests will impact your unit's service to the colleges.</i>	<input type="checkbox"/> 1: Replacement Technology <input type="checkbox"/> 2: New Technology <input type="checkbox"/> 3: Software <input type="checkbox"/> 4: Other _____			
Other Equipment: <i>If your unit receives equipment that is not considered audio/visual or computer equipment technology, , explain how this request or requests will impact your unit's service to the colleges.</i>	<input type="checkbox"/> 1: Replacement <input type="checkbox"/> 2: New <input type="checkbox"/> 3: Other _____			
Total cost of resource needs over and above current budget allocation:			\$ 957,173	

Section Eight: Conclusions

Present any conclusions and findings about the unit and its connection to the work of the colleges. (ACCJC Std IV.D.2, IV.D.5, IV.D.7):

The focus our efforts will be on the key initiatives the Chancellor as outlines for enrollment, student success, and equity. These are significant projects for Dualenroll, CRM Recruit, Student Portal\mobile with Experince Portal, TouchNet, and Okta. These projects will be implemented over the next 2 years and require significant resources to be successful.

Our cloud solutions project offers the best option to provide increased services to the colleges as we reduce our maintenance work time to increase support optimization services. This will allow us to provide more resource time to support the college's goals. We have seen significant services enhancements and cost savings as we optimize services and systems with our cloud solutions. We are looking to complete all 4 waves of migration Summer of 2022.

New security challenges must also be addressed in providing this service.

The move to SaaS solutions is the next phase of the plan to increase service and reduce costs. We have started our project this year with Banner 9 Next Generation SaaS. This development project is tentatively slated for completion in late fall 2022.

This past year we have been able to setup an IT project management office with two project managers. We are building a project management office from the ground up. We plan to have initial processes in place in Jan 2022. This includes automated intake, status, reports, district wide communications and coordination.

This past year remote technologies and our continued push to the cloud has been a focal point for IT and the entire District. To address objectives IT will continue to work with representative groups to address the needs for the district. This includes upgrades to support our faculty and staff in this new remote environment.

New technology and development will continue to be needed to meet our objectives. By Establishing I.T. Project Management industry standards and best practices to address the needs of the colleges and the District Office we will facilitate projects' deliverables and services to support educational goals.

Our colleges are very innovative and want technology to help them provide solutions by using new systems, expansion of existing systems, grants, etc. These requests accelerate at a pace that can only be supported by a combination of SaaS cloud solutions and tying staffing levels to innovation, growth, and additional support. Guided Pathways objectives will continue to be a priority driver.

Even with the cloud advantages we continue to experience rapid growth in the technology needs from our colleges. This is driven due to new applications, technology change, state requirements changing, and process review and improvement.

Significant IT staffing challenges have had an adverse impact in meeting our customers' needs that are dependent upon DO IT. Our new Telecommuting agreement will be tested to see if it can help address these staffing concerns however at this time it is an in state option only. The ability for us to hire out of state is inhibiting our recruiting efforts and retention has been impacted with several staff leaving due to competition.

Routing and Review

Submitter's Name: Gary Moser

Title: VC IT\CIO

Submitter's Signature: *Gary Moser*

Date Submitted: 9 Jan 2023

Submitter's Immediate Supervisor: _____

Date of Review: _____

Chancellor's Signature: _____

Date of Review: _____

Date of Presentation to Administrative/Consultation Council: _____