

2024-2025

Kern Community College District

District Office Administrative Unit Review

Information Technology

Enter Name: David Barnett

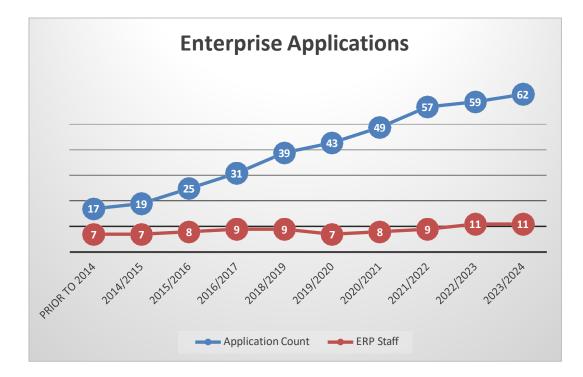
Enter Title: Interim VC IT\CIO Submitted by: David Barnett

2024-25 District Office Administrative Unit Review for: Information Technology

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.
- Utilization of project intake and planning/governance/prioritization processes will be necessary to properly plan and staff projects for successful completion. Unplanned projects take resources that impact previous plans/commitments causing critical delay
- The DO IT staff is very dedicated and talented as we continue transitioning to moderntechnologies including a major effort to migrate Banner to a Software as a Service (SaaS) model.
- The relationship between the District Office IT and the Colleges IT departments is a strength in supporting our students, faculty, and staff.
- Our administrative team has done significant work in process improvement to meet the needs of the department.
- Enterprise Applications has a significant and constantly increasing workload for technology due to growth of new requirements, projects, customizations, grants, and state projects. The addition of a Business Analyst focused on Human Resources significantly streamlined operations and reduced the support burden on ERP Analysts, enabling them to prioritize innovation. To further enhance efficiency, we recommend introducing a dedicated Business Analyst role for Student Services, which will expedite project delivery and reduce daily support demands in this critical area.
 - Technology Applications growth (21 to 62) since 2015 increased 66%.
- Resource constraints inhibit research, innovation and development efforts for newer technology that would increase our ability to meet student and staff needs for IT systems and applications district wide. These constraints are evidenced by the significant backlog of new IT requirements.
- Technology project management to support current and future technology increases\changes is needed in the district. The design, planning, and coordination of complex and multiyear projects to support new\expanding requirements include many objectives such as guided pathways, new technology development and implementation, and state applications.
- There are some IT applications that have a significant amount of functionality overlap and significant customizations which impacts the quality of IT systems in use.

- Numerous factors are driving increased need for IT Network, Server and Storage services district wide. Some of these factors are as follows:
 - Facilities projects across the District such as BC Main Campus, BC Arvin and a new site for PC
 - o Demand for higher speed and redundant Internet connections for most KCCD sites
 - o Ongoing expansion of Wi-Fi for Outdoor spaces at most KCCD sites
 - Expanded use of Fixed and Mobile Video Surveillance systems
 - Needed improvements to 911 Calling capabilities for Public Safety purposes
 - o Ongoing need for secure, reliable, and fast remote access
 - Rapid growth in operational devices such as door lock systems, cafeteria systems, HVAC systems and sprinkler equipment all of which rely on IT infrastructure to function
- The District Office continues to see a change and increase in staffing, academic initiatives, grant programs and special events that require increased IT Tech support. We see these types of changes only continuing as more and more initiatives come about to support the educational mission of our institution. The existing IT support staff of 2 strain at times to keep up with demand for IT support services. This is especially true when one or more staff are on vacation or out ill.
- The IT Security program for our district is continually mitigating threats, addressing cloud operations, ensuring compliance requirements are met, providing end user education, and implementing security prevention techniques for our systems.
- The requirements for Gramm Leach Bliley Act (GLBA) compliance are being reviewed and implemented into business process. The focus on the regulatory requirements will ensure required safeguards are in place.
- Key committees are essential to support the colleges. These include IT Directors meetings, Vice Presidents meetings, and Banner Steering Committee.



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 are requested each year within the district. Staffing levels will need to be evaluated as more and more applications come online.

Work ongoing to support <u>each</u> 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.

The IT unit continues its efforts to enhance, explore, secure and implement networks, 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.

Partnership with vendors including Ellucian, Amazon Web Services, Ad Astra, and EAB have proven fruitful in advancing KCCD's mission and supporting our students. These partnerships require significantly more resources to initialize, but can lead to innovative solutions that are highly tuned to meet KCCD's needs. In particular, key partnerships with Ellucian's Banner SaaS and AWS AI/ML tooling are key initiatives to move KCCD forward.

Remote work has allowed KCCD DO IT to attract and retain talent that it otherwise would not have had access to. It is difficult to find the talent we need locally and with a growing need for technology, we anticipate this will continue to be a key strategy in maintaining appropriate staffing levels going forward in order to meet the needs of the district. Salaries for IT positions have fallen significantly behind other CCC's. Remote work has allowed us to fill some positions, however, our salary is even beginning to affect the remote offerings.

Although complexity and size vary by College, **Facilities** related projects have an ongoing and increased impact on both College IT and DO IT teams. Whether it's bringing up a new site such as BC Arvin or modernizing existing buildings, IT engagement is required to ensure that proper IT infrastructure is planned for and deployed for these projects. In addition to large scale building projects, there are many other systems such as HVAC, Refrigeration systems, Irrigation controls and Door Locks that depend on IT support for setup and ongoing support.

Public Safety initiatives such as Mass Notification, 911 call response and operational resiliency during power outages will continue to require DO IT and College IT resources as many of these initiatives rely on technology.

Increased demand for IT infrastructure services such as Network connections (on-campus, site-to-site), servers, storage and Wi-Fi across the district will continue. Some key work categories crucial to deploying these services are:

- Project planning and scoping
- Project management and implementation
- o Responding to break-fix requests
- o Contract and budget management
- Optimizing or addressing performance issues with infrastructure services
- Collaborating with College IT and other departments as needed
- o Continued review and improvement of IT support and business management processes
- Professional development to keep up with the ever-changing IT industry and relevant solutions.

An increase in users, programs, and events at the District Office is putting strain on DO IT Tech Support staff supporting things such as Board Meetings, Help Desk Calls, and desktop support at the District Office. Without more staff, increased wait times are likely.

We anticipate ongoing and increasing need for project management which may require an expansion of staff, budget, and services to meet demand for new and upgraded systems.

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

- Continued expansion and upgrades of underlying IT infrastructure (networks, servers, storage)
- Cloud services optimization continues to be a key focus
- MIS reporting processes continue to be updated in coordination with IR
- Address critical positions staffing levels and training
- o Project management processes formalized and standardized across the district
- Communications process enhancements
- o Security will be a continuous and concerning challenge

Renewed emphasis on ADA requirements will draw on limited resources

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 Help Desk 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.

Populations Served:

- Students (via Website/Portal, Banner, Canvas, Help Desk, Wireless, AWS AppStream, SSO)
- Community (Website)
- 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, Stakeholders, Guests, etc. (who sometimes need data from our systems, access to Wi-Fi when they visit, etc.)

Section One: Unit Overview Section One: Unit Overview (continued)

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

One way we support our mission is by constantly enhancing our network and Wi-Fi capabilities. We understand that seamless connectivity is essential for online learning, communication, and supporting our operations. By investing in state-of-the-art networking equipment, networking services, technologies for enhancing public safety and continually expanding our Wi-Fi coverage, we enable our students and faculty to access resources and collaborate effectively, whether they are on campus or learning remotely.

More specifically for Wi-Fi capabilities and represented by completed and future goals for District IT, we have a multi-year (long-term) vision to equip all or most Outdoor spaces across the District with Outdoor Wi-Fi. Substantial progress has been made toward realizing this vision and work will continue to increase coverage. With regards to Indoor Wi-Fi coverage, most spaces across the district were built out several years ago and we continue to keep this infrastructure upgraded and current as needed to meet the needs of our students and employees.

Our 24/7 help desk is a lifeline for our students, ensuring that they have access to assistance and support whenever they need it. Whether it's troubleshooting technical issues during late-night study sessions or guiding students through the intricacies of our digital platforms, our dedicated help desk team is there to provide timely and effective solutions. This accessibility not only reduces barriers to learning but also underscores our commitment to student success, ensuring that they can make the most of their educational experience at any time, day or night.

Supporting our Banner Enterprise Resource Planning (ERP) system and the integration of over 70 systems is a fundamental aspect of how our IT department contributes to the success of our students. The Banner ERP serves as the backbone of our institution, facilitating seamless administrative processes such as student registration, financial aid disbursement, academic record management, purchase order management, check printing, and more. By maintaining and optimizing this system, we ensure that students have a streamlined and efficient experience when enrolling in courses, accessing financial support, and tracking their academic progress.

Moreover, an extensive number of integrated systems extends far beyond administrative functions. These systems encompass learning management platforms, library databases, communication tools, bookstore systems, parking permit systems, and more, all of which are essential for delivering a comprehensive educational experience. Through our diligent management of these integrations, we enable students to access a wealth of educational resources and services that enhance their learning journey. Whether it's accessing digital textbooks, collaborating on group projects, or connecting with faculty and peers, these integrated systems play a pivotal role in ensuring that students have the tools and resources they need to excel academically. In essence, our commitment to maintaining and improving our Banner ERP and integrated systems directly aligns with our mission of providing students with a supportive and technologically-advanced environment in which they can thrive.

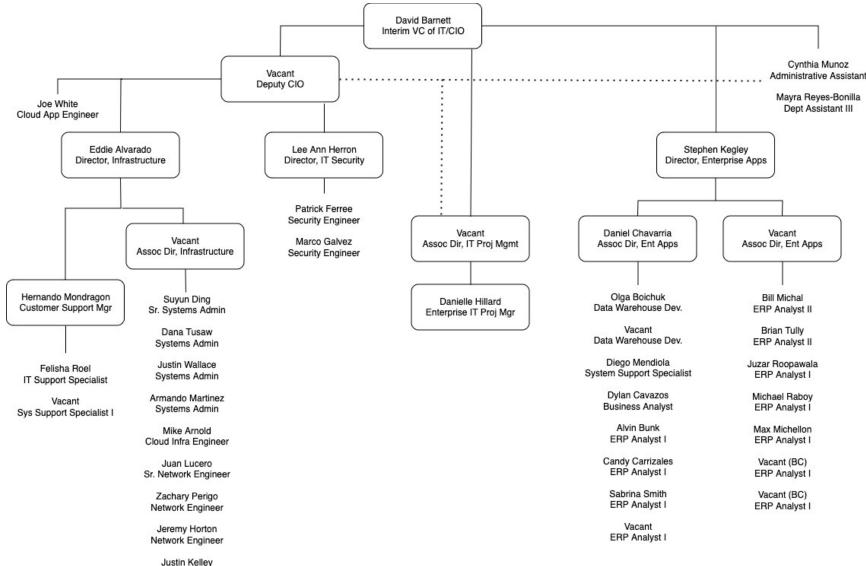
Our data warehousing and reporting group plays a vital role in supporting our mission by providing comprehensive insights into student performance and

institutional operations. Through their work, we empower institutional research so decision makers can make data-driven decisions that enhance educational outcomes, allocate resources effectively, and continually improve our programs and services to better serve our students and community.

Our IT security program plays a central role in advancing our college's mission. Through comprehensive security training for staff and faculty, we promote a cyber-aware culture, safeguarding our institution's digital assets. Additionally, robust security measures bolster trust in our community, enhancing our institution's credibility and meeting regulatory requirements. This trust allows us to embrace emerging technologies confidently. Our expertise in identity and access management ensures seamless, secure access, further safeguarding our digital ecosystem. In essence, our security program enables a safe, trustworthy environment for education while upholding our community's trust and our institution's reputation.

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.



Network Engineer

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	Additional notes
		Functions/Processes	
Chief Information	IT Leadership (Strategy, Vision, Planning)	State Initiatives /	
Officer	IT Governance	Representation	
	IT Project Portfolio Management	Contracts / Board	
	Campus Relationships	Docs Review	
	Policy and Procedures		
	Strategic Vendor Relationships		
Deputy Chief	IT Leadership (Strategy, Vision, Planning)		
Information Officer	Accreditation, AUR, Technology Master Plan Development		
	Campus Relationships		
	Strategic Vendor Relationships		
	Tiger Team (Special Projects)		
Administrative	Administrative Support for IT Management Team		
Assistant and	Budget Tracking		
Department Assistant	PO and Invoice Tracking		
III	Coordinate Travel		
	Committee/Group Support		
	Contract Processing		
Director of IT	Oversee/Manage:		
Infrastructure	Cloud Infrastructure including application delivery		
	Helpdesk Operations (IT Customer Support)		
	Local Site Networks (LAN and Wi-FI)		
	Site-to-Site Network Connections (WAN) and Internet Access		
	Backend Video Surveillance systems		
	Telephone Systems, Mass Notification		
	Servers/Systems/Storage(SANs)		
	Microsoft Technologies (Office 365)		
	- Active Directory		
	- Email		

	- SharePoint	
	- OneDrive	
	- Teams	
	Zoom Account Management	
Associate Director, IT	- Operational Leadership for On-Premise and Cloud Systems	
Infrastructure	and Network services	
	- IT Infrastructure architecture, planning, implementation,	
	optimization and support	
	 Assist Director with vision, mission, strategy 	
	 IT Engagement for Facilities projects 	
	- IT Infrastructure Outage and Escalation management	
	 IT Infrastructure project coordination/lead 	
IT Customer Support	- Oversee the delivery of effective IT Help Desk Services for	
Manager	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 IT Customer support frameworks	
	 Manage budgets associated with the IT Help Desk 	
	operation.	
	 Perform other duties as assigned by the Director, IT 	
	Infrastructure.	
Network Engineer (Qty	- Infrastructure for new KCCD sites (i.e. BC SW)	Network Switches: 350
3)	- District Wide Network Switches	Devices: 5000
,	- District Wide Wi-Fi networks	Wi-Fi Access Points: 900
	- District Wide Network Closet Power (UPS, PDUs)	Wi-Fi Controllers: 15
	- Telephone and Voicemail Systems (including carrier	Security Video Cameras:
	services from AT&T, Spectrum, Frontier and others)	249
		217

	 Telephone Bills Management (District Wide) Mass Notifications systems Backend Video Surveillance Systems (Server, Storage) Backend Door Lock systems and support coordination 	Telephone Switches: 35 Telephones: 2700 Telecom Carriers: 7
Senior Network Engineer	 KCCD Site-to-Site Connections (Primary and Failover Internet Access for all KCCD Sites KCCD Data Center Environmental (Power, HVAC, Fire Suppression, etc.) 	Sites: 14 Network Routers: 22 Sites with both Primary and Backup Network Site- to-Site Connections: 9
Cloud Infrastructure Engineer	 Senior/Team lead for Networking group Cloud Networks for Amazon Web Services (AWS) Cloud environment Cloud Security Infrastructure for AWS 	Cloud Applications: 160
Senior Systems Administrator	 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) 	Servers on Premise: 320 Servers/Apps in the Cloud: 80 Total Storage: 450TB
Systems Administrator (3)	 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 Email Distribution Lists Security Remediation 	Employee Email Accounts: 3200 SharePoint Sites: 400 Student Email Accounts: Enrolled: Approximately 32,000 Active: Approximately 500,000

	 Systems Monitoring Misc App support (Abila, Quicken, Abacus Law, SARS, etc) Backend Video Conf Systems and support for campus Video Conf rooms 	Email Distribution Lists: 425
IT Support Specialist (1)	 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 with installation and support of Systems Infrastructure such as Servers and Microsoft Technologies. Support and cross-train on End-User Device (Computer, Laptops) Life-cycle management (i.e. patching, device security, software installation) 	
Systems Support Specialist I (1)	 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. Develop, optimize, and deploy, OS images and software packages to District Office computers. 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) Meeting and event media support, including audio, video, and streaming systems. 	Annual # of Help Desk Cases: 15,800 District Office PCs: 500 (increase from 100 over 3- year period) District Office Conf Rooms: 7 Labs/Classrooms Supported: 10

Director of IT Security	 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. 	Provide security support to IT and other departments as needed. Plans and conducts IT security awareness training.
Security Engineer (Qty 2)	 Provide hands-on security engineering for IT projects. Administer security tools, anti-virus, etc. Technical lead on security projects. Responsible for security vulnerability assessments and working with other IT teams to remediate findings. Monitors and response to cyber threats Implement and support IAM solutions. Respond to and resolve security incidents. Respond to tickets related to user accounts and SSO/MFA. 	Reviews/validates security controls for new IT projects. Technical lead for security incident response.
Director, Enterprise Applications	 Enterprise Application Strategy Interfacing with VPs Reporting Coordination Data Warehouse Web sites Applications and systems analysis and recommendations 	Budgeting General Employee Supervision Evaluating Systems / Integrations System Down Communication / Management
Associate Director, Enterprise Applications (2)	 Ellucian Cloud Operations Ellucian Upgrade Coordination ERP Team Interfacing with Director Groups Coordinate operational support for applications managed by team. 	ERP Budgeting General Employee Supervision Evaluating Systems / Integrations System Down Communication / Management

ERP Analyst I/II	- ERP Technical Support:	Support of the
	- Banner: General, Student, Finance, HR, Accounts Receivable,	following includes:
	SSO Manager, Self-Service 8.x, Self-Service 9.x	Data Analysis/Advising
	- Banner Security	Report Writing
	- Banner Document Imaging	State/Federal
	- KCCD Customizations	Reporting (MIS, NSC,
	- Ancillary App Technical Support and Integration:	etc.)
	- DegreeWorks	System Admin Duties
	- TD Client	Documentation
	- FormFusion & Intellicheck	Technical Testing
	- Class Climate	Assist with Business
	- Schedule Plus	Process Automation
	- Payment Gateway	New System
	- SalePoint	Analysis/Estimates
	- Integration/Automation:	Data Security
	- AcademicWorks	Permissions
	- Library Systems	Accessibility Requests
	- Maxient	Documentation
	- Canvas	
	- Interim Portal	
	- eTranscripts	
	- Credentials Inc	
	- eCampus Bookstore	
	- eLumen	
	- EAB Navigate / Advise	
	- Blackboard Connect (Emergency Texting)	
	- Blackbord Help Desk	
	- Parking Management Bureau	
	- ASAP (registration system for Levan Institute + Community Ed)	
	- Campus Logic	
	- Starfish (4 main components)	
	- Student Portal	
	- AACMS	
	- ComEvo	
	- Banking Integrations/Student Check Reconciliation	

	DavkMahila	
	- BankMobile	
	- CalCard	
	- FacilitySoft	
	- OpenGov	
	- CCCApply	
	- Accuplacer	
	- Futuro Health	
Systems Support	- Assist with lower-level technical support for the systems	Documentation
Analyst	above, specifically:	User Support
	- Canvas	Report Writing
	- Omni Website CMS	Running Scripts
	- CRM Recruit	
Data Warehouse	- ETL development	Report Writing
Developer/Admin	- Function Writing	Data Imports
	- IR Support	Structures
	- Data Imports	Performance
	- Technical Support:	Support
	- Cognos, ODS, Oracle Data Integrator	Access Requests
	- Invoke	Security
	- Ellucian Insights Data Warehouse & Reporting	Documentation
		Data Freezes
Cloud Applications	- AWS Cloud Application Architecture	Troubleshooting
Engineer	- Research and Development	Documentation.
	- AWS AI/ML Architecture / Automation	
	- Containerization & Automation Support	
	- Application Architecture Support	
	- DevOps	
Associate Director, IT	 Project Management Leadership, Processes, and Standards 	Supervision of
Project Management	- Portfolio and Program Management	Enterprise IT Project
		Management
Enterprise IT Project	Project Intake Process	PM Standards
Manager	- Ensure projects are delivered on time, within scope, and on	Documentation
INIGIIOSCI	budget	Smartsheet Support
	- Identify, prioritize, and mitigate project risks	
	 Communicate project progress to all stakeholders 	

Develop project documentation

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.)

(AUOs) Plan Period Desired Outcome Alignment	Administrative Unit Outcomes (AUOs)	Strategic Plan Alignment	Review Period	Method of Assessment	Outcome or Desired Outcome
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1. Applications	Goal 1, 2, 3	2022-2023	Annual Metrics	Application uptime reflects annual
				standard of 99%.
Applications meet availability reflected			a. Application Uptime	
by annual standards.			b. Upgrade/Patch Quantity & Dates	Meets current update and version
			c. Regulatory Data Submission	requirements for applications.
Applications are updated and meet			Dates	
version requirements.			d. Integrations	
Meets Federal and State compliance				Federal and State Compliance
requirements.				requirements are current.
Applications and integrations are				Integrations are maintained and
supported and available				accessible

2. Infrastructure	Goal 1 , 3	2022-2023	Annual metrics	
Network uptime reflects our annual standards			a) Network up-time b) Systems up-time	Network uptime reflects our annual standards of 99%.
System uptime reflects our annual standards			 c) Upgrade\Patch completed d) Helpdesk calls received\resolved timeline 	System uptime reflects our annual standards of 99%.
Systems and network meet update and compliance requirements.				Meets current update and version requirements for applications.
Helpdesk tickets are resolved in a timely fashion				Helpdesk call resolution meets industry standards
3. Security	Goal 1, 3	2022-2023	Annual Metrics	
Security audits and remediation are coordinated district wide User security training programs are provided Implementation/currency of BPs, Aps, and/or internal procedures Security standards are provided for technology			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	District wide audit and remediation completed. Security training is available through Keenan Safe College, Flex Week, Phishing campaigns, and quarterly IT newsletters. Staff elect to take the training. The metric is to identify how many attend.

l. Project management	Goal 1, 2, 3	2022-2023	A submission process for new technology	Provide an effective technology
Provide an effective technology			related requests	project process.
coroject management process. Coordinate people, vendors, and esources to achieve a successful and imely conclusion.			Project completed within estimated time requirements. Project completed within budget estimates.	Projects are completed on time and within budget Accurate and timely project reporting method.
Provide a transparent and timely project reporting process.			A cost/benefit analysis process for submission of new systems and applications.	

5. Strategic planning	Goal 1 –	2022-2023	District Technology Advisory Committee	A Process for district
Provide for new\innovative	Maximize		feedback	stakeholders in submission of
technology solutions.	Student			technology recommendations.
Develop a proactive research and development process	Success, Ensure Student		Review proposed new systems and applications to meet district technology needs.	Increased functional\technical process improvements
Provide a Technology Master Planning document	Access, and Reduce Equity Gaps Goal 3- Strengthen Organizational effectiveness		Assess plans, recommendations, and future technology requests. Use the governance process to review a district wide technology plan	Technology Master Planning document created and maintained Accurate and timely reporting to district stakeholders.

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.

Vulnerability scans are performed on an ongoing bases and vulnerabilities are remediated with appropriate IT teams. The security team provides robust phishing campaigns and online security awareness training to keep users aware of emerging trends. Policies, such as, APs and BPs are continually monitored for regulatory requirements and industry best practices. Security standards are reviewed and implemented on all technologies to combat new threats and grow the 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)	2019-20	2020-21	2021-22	2022-23	2023-24
myBanWeb Uptime	99.97%	99.98%	99.97%	99.89%	99.97%
www (bc,cc,pc,do) website uptime	>99.999%	>99.999%	>99.999%	>99.999%	>99.999%
Applications implemented past 5 years – (2015 count was 21)	45	50	54	56	62
% of Staff who have received security awareness training.	10.8 %	10%	20%	25%	2%
Average # of outstanding High/Critical vulnerabilities	216 H\59 C	189H\53C	206H\67C	234H\144C	1.6KH/169C
Average # of High/Critical vulnerabilities > 90 days old	135 H\16 C	124H\38C	106H\15C	138H\40C	527H/70C
Help Desk – Tier 1: Average speed to answer initial phone call (in seconds; goal is	92%	63	64	52	27
Help Desk – Tier 1: Average post call random survey scores (scale 1 to 5)	4.4			4.3	4.4
Help Desk – Tier 1: First Call Resolution Rate	77%	80%	69%	77%	80%
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)	20	60	100	147	160
IT PMO Projects Closed			4	5	5
IT PMO Projects In Process (as of June 30)			10	7	5
Current IT PMO Project Backlog* (as of June 30)			0	0	1
*Backlog includes approved projects not started and projects in intake process					

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?

Attracting and hiring highly skilled IT staff concerns prevented us from replacing vacancies and dramatically affected the IT team. Departure of key staff due to retirement and higher pay elsewhere have created difficulties in sustaining previous levels of service for IT operations.

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.

Within the last 18-24 months, College requests and needs increased approximately 35% for Video Surveillance (Camera) systems. We expect this trend to continue for the foreseeable future which will impact our IT support teams.

Keeping up with deferred maintenance and upgrades continues to be a challenge for the DO IT Infrastructure team. A couple of examples of this are:

- Assessing and addressing gaps in our site cabling plants (fiber, copper) across the district. The longer this remains on hold the more challenges we'll face in keeping our IT Infrastructure upgraded to meet the needs of the district.
- Modernization of where user files (data) are stored, how they are accessed securely and how they are securely shared within and outside of KCCD.

Several DO IT Senior staff and some managers are approaching retirement within the next 1-3 years. An increased focus on succession planning and documentation will be paramount in the near-to-mid time horizon. This will require increased time and work commitment from staff and management to: a) Plan for these changes, b) Keep existing IT services functioning properly and c) be responsive to new IT requests/needs.

The continued evolution of IT infrastructure, applications and services in scale and complexity has put more pressure on our teams to focus on Security across our entire IT portfolio. This has and will continue to have a workload impact on our IT teams and more specifically on our DO IT Security and Infrastructure team members.

The students were experiencing phishing campaigns during Spring of 2024. The phishing campaigns ranged from targeting bank accounts to financial aid. While the IT team responded by resetting email accounts when notified, the best practice is to implement MFA for students to access email. The projected project is being planned to implement MFA for students.

Unexpected project scope changes and last-minute priority projects continue to impact IT resource management and project timelines. Examples of unexpected projects include the Regent Ed and the Ocelot API integrations. The ClockWorks implementation shifted from a single sign-on only

integration to a full Banner data integration. A continued focus on planning and project prioritization is important.

Banner financial aid support became a major unexpected workload. In December 2023, the Department of Education (DOE) made significant changes to the FAFSA process for financial aid students and these changes required major redevelopment within the Banner financial aid module.

There has been a significant number of Banner patches and upgrades to address the DOE changes and given the compressed rollout schedule from Ellucian, there have been a number of critical defects within these patches and upgrades. This created a major unexpected workload for the Enterprise Applications team, along with the campus Financial Aid Departments.

Enrollment fraud prevention quickly developed into a unexpected critical high priority project and a task force of campus and IT resources was formed to address this challenge. Machine Learning was used to help address some of these fraud issues with great success in the Spring 2024. Resources to support Machine Learning going forward will need to be addressed for long term support.

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 Capacity Increases: CC Main, Bishop, Mammoth, Tehachapi	1,3	Completed: (Date) Revised: (Date) Ongoing: (Date)	DONE: CC-Tehachapi Pending: CC Main, Bishop, Mammoth delayed due to vendor delays and other project priorities.	ALL	
Emergency Communications Phase 1 and 2	3	Completed: (Date) Revised: (Date) Ongoing: (Date)	Phase 1 is complete. Phase 2 to be completed this period. Timeline extended due to unforeseen WAN change prerequisites.	ALL	Risk Management

Help Desk:	3	Completed:	80% of article updates identified and completed in the 23/24 period.	IT Directors	DO IT Directors
Ensure that our Knowledge Base (KB) articles contain the most accurate and current information possible.		(Date) ☐ Revised: (Date) ☑ Ongoing: (Date)	20% are pending/remaining for updates. These updates apply to internal (IT/Help-Desk Service provider use) and external (end- users) articles. These are expected to be completed 24/25.		
Outdoor Wi-Fi – BC: AG, South Stadium, Stadium Practice Field, South Softball Parking Lot.	1,3	Completed: _Dec 2023 (Date) Bevised: (Date) Date) Ongoing: (Date)		ALL	
Cloud Application Streaming	1,3	Completed: Sept 2023 (Date) Revised: (Date) Ongoing: (Date)	This goal has been completed and IT continues to support this service.		
Increase remote device management capabilities	3	Completed: _April 2024 (Date) Revised: (Date)	Improved laptop/workstation OS updating, configuration management and security capabilities.		

		Ongoing:		
		(Date)		
INFRA – Update Windows on Key Servers	3	Completed: _Aug 2023 (Date) Revised: (Date) Ongoing: 	Updated End-of-Support Windows 2012 Operating Systems on key servers hosting various applications district wide	
INFRA – Consolidate/Modernize Remote Access services	3	(Date) (Date) (Date) Revised: (Date) (Date) (Date) (Date) (Date) (Date)	Evaluated and tested multiple solutions, selected solution, implementation more than 50% complete.	
INFRA – Migrate on-premise employee and student home drives to the Cloud		 ☐ Completed: (Date) ☑ Revised: (Date) ☑ Ongoing: (Date) 	Due to the size of the original goal/project, this goal is revised and the focus in 24/25 will be to move Employee and Student home drives to the Cloud. Moving department file shares to the Cloud will take much longer to scope and implement.	
Cloud Security Review		Completed: _June 2024 (Date) Revised: (Date)	Conducted Security Review of AWS Cloud Environment.	

		Ongoing:		
		(Date)		
INFRA – Core switch replacements for BC-		Completed:	BC Southwest was completed but	
Southwest, CC-Bishop and CC-Mammoth		_June 2024	requirement and timeline for CC-	
		(Date)	Bishop and CC-Mammoth has been	
		Revised:	moved to the 25/26 Fiscal year.	
		(Date)		
		Ongoing:		
		(Date)	Deney Comment 2024 Philabian	
Security Awareness Training	3	Completed:	Done: Summer 2024 Phishing	DO IT Security
		Ongoing	Campaign	
		(Date)	Donding: Caring 2025 Dhiching	
		Revised:	Pending: Spring 2025 Phishing Campaign	
		(Date)	Increase availability for all Colleges for	
		\square Ongoing:	Flex Week	
			New: Virtual training to all employees	
		(Date)	New. Virtual training to an employees	
Review and update the AP3720 User Acceptance	3	Completed:		DO IT Security
		(Date)		
		Revised:	Pending: User Acceptance Policy	
			AP3720 is under review. Create	
		(Date)	Information Technology Security Plan.	
		Ongoing:		
		(Date)		

Create Information Technology Security Plan.	3	Completed: Ongoing_ (Date) Revised:	Pending: Create Information Technology Security Plan.	DO IT Security
		(Date)		

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	1				
		Ongoing:			
		(Date)			
		L			
Ellucian Access Management Project	3	Completed:	Complete: Implementation of the		DO IT Security
		(Date)	Ellucian EUP solution. The Ellucian		
		Revised:	EUP is still being configured and		
			designed.		
		(Date)			
		Ongoing:			
		(Date)			
Banner 9 – Self-Service Modules (Student/Faculty,	1,3	Completed:	Banner 9 Student Registration went	BC, PC, CC	DO IT Systems
Finance, Human Resources)			live for Spring 2022. Remaining		Maintenance
		(Date)	modules are scheduled to go live		
		Revised:	during the Spring 2025 semester.		
		(Date)			
		Ongoing:			
		6/30/2025			
		(Date			
Ellucian Experience Platform (SaaS)	1,3	Completed:	Migrate Banner and related	DO, BC, PC, CC	DO IT
	1,5		applications from a current AHS	00,00,10,00	boll
		(Date)			
		Revised:	hosting model to a SaaS hosting		
			model.		
		(Date)			
		\square Ongoing:			
		_6/30/2025			
		(Date)			

Ellucian Experience Portal	1,3	Completed: (Date) Revised: (Date) (Date) Ongoing: 6/30/2025	Implement the Ellucian Experience portal to replace the existing KCCD custom portal. A soft launch for key stakeholders was completed in April, 2024. The soft launch will be expanded during the Fall 2024 semester with a full launch scheduled for Spring 2025.	DO, BC, PC, CC	DO IT
Banner Standardization	3	Completed: (Date) Revised: (Date) Ongoing: _6/30/2025_ Date	 Migrate KCCD Banner customizations to baseline Banner functionality. Some of the key customizations are the following: Academic Standing and Unit Limit Overrides Faculty Load and Compensation (FLAC) Spreadsheet Budgeting Process 	DO, BC, PC, CC	DO IT – systems maintenance
Implement a Structured Patching/Testing/Release Cycles for Banner	3	Completed: (Date) Revised: (Date) (Date) Ongoing: 6/30/2025 (Date)	Implement a structured testing and deployment cycle for Banner and related system upgrades and support patches that aligns with the Ellucian SaaS hosting model.	DO, BC, PC, CC	DO IT – systems maintenance

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.)
Help Desk – Implement Customer satisfaction survey for KCCD IT Staff resolved cases	3	The current post case resolution survey documents customer satisfaction with the managed service Help Desk agents (Anthology Level 1). To this point, we have not received measurable feedback regarding customer satisfaction with KCCD IT Staff (classified as level 3 in our help desk system, SmartView). GOAL: develop a survey focused on satisfaction with level 3 customer services to better determine areas that need improvement locally. Survey will be part help desk case closure process.		
INFRA WAN - Cal City	3	Install Internet Connection at CC Cal City site. This will be a new connection. Previously, the site used a much slower cellular (Mi-Fi) based connection.	СС	
INFRA WAN - Bishop (Backup)	3	Install Backup Internet Connection to add resiliency at CC Bishop site.	СС	

INFRA WAN – KCCD Site	3	Replace WAN routers district wide with	ALL	
outer Replacements modernized, more secure and more				
		resilient architecture (SD-WAN)		
INFRA Wi-Fi – Replace 70	3	Of 200 Indoor Wi-Fi Aps:	ALL	
Indoor AP replacements		Replace approximately 35% due aging		
		hardware and to improve coverage and		
		performance.		
		30% were previously replaced		
		Final 35% will be done in 25/26.		
INFRA Systems – Replace	3	Replace aging Storage system (SAN) at	DO	
Storage at the DO		the DO		
INFRA Systems – Consolidate	3	Consolidate from 2 Enterprise backup	DO	
Backup software from 2 to 1	5	software solutions to 1 and realize an	DO	
		approximate annual cost savings of		
		\$100,000		
INFRA Facilities – BC Arvin	3	Provide necessary IT Infrastructure for	BC	
(install IT infrastructure)		NEW BC Arvin site		
Assessment of Identity and	3	Pending: Partnering with a third party,		DO IT Security.
, Access Management Services		SIMEIO, to assess the maturity and current		,
		process for account creation, management,		
		and deletion. The assessment will conclude		
		Fall 2024 for additional steps to take to		
		mature and enhance the access management process.		
Deployment of two-factor	3	To provide student protection to email and		
authentication for students		Banner MFA for students is project for early		
		2025 implementation.		

Establish a baseline of compliance for GBLA	3	Complete assessment of the GLBA requirements and identify way ahead		DO IT Security.
		actions to mature and harden the IT environment.		
Cloud Security – Implement 3 recommendations from completed Security Review	3	 Recommendations to be addressed: 1) Ensuring all disk volumes for servers are encrypted (existing and new) 2) Add Firewall and Access Keys requirements for IT Staff access to servers 3) Add 2 controls to limit use of "root" account for day-to-day operations 		DO IT
User Awareness Training: Virtual Training Sessions & Availability Flex Week	3	Provide user phishing campaigns with training every semester. Be available to Colleges for flex week for Security training.		DO IT Security.
ClockWorks Banner Integration	1,3	Implement a SaaS compliant Banner data integration with ClockWorks Enterprise	BC	DO IT
Implement TouchNet Student Advisor	1,3	Implement TouchNet Student Advisor to replace the TouchNet Cashiering applications.	DO, BC, CC, PC	DO IT, Business Services
Ocelot API Integration	1,3	Support the implementation of the Ocelot chatbot API integration with Banner. This is a beta partner project with Ocelot.	BC, CC, PC	DO IT
Element 451 CRM Implementation	1,3	Implement the Element 451 CRM Banner API integration	BC	DO IT

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)		f Information Officer		Data Warehouse Developer (2)		
	Administrative AssistantDA IIIDirector of IT InfrastructureDirector of Enterprise ApplicationsDirector of IT SecurityAssociate Director of EnterpriseApplications (2)Associate Director of IT InfrastructureIT Customer Support Operations ManagerAssociate Director of IT ProjectManagementEnterprise IT Project Manager		ERP Analyst II (2) ERP Analyst I (7 GUI, 2 COF) Business Analyst Cloud Infrastructure Engineer	Systems Support Analyst Senior Network Engineer		
			Cloud Applications Engineer Security Engineer (2) IT Support Specialist	Network Engineer (3) Senior Systems Administrator		
				Systems Administrator (3)		
			Systems Support Specialist I			
Technology / Equipment			rs, storage systems, network infrastructi	ure, data center equipment and modular furniture		
Space / Facilities		at the Weill Center				
Budget (Unrestricted) Total		\$	Notes (i	f any)		
1000 (Academic Salaries)		\$				
2000 (Classified Salaries)		\$ 4,640,992				
3000 (Employee Benefits)		\$ 2611,298				
4000 (Supplies & Materials)		\$ 31,300				
5000 (Operating Expenses and Services)		\$ 8,217,745				
6000 (Capital Outlay)		\$ 761,200				
7000 (Other Outgo)		\$				
Budget (Unrestricted) Total		\$ 16,262,535				
Budget (Contract/Communit	y Ed) Total	\$				

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	College(s) requesting this new resource to your unit. <i>(Leave blank if</i>	Rank
		and what college planning	no college requests	
		reflects or suggests this need.	the new resource.)	
Positions: Discuss the impact new and/or replacement management and/or staff will have on your unit's service to the colleges.	 1: Classified Staff 2: Administrator 1. IT Support Specialist (~123k) 2. Security Engineer (~164K) 3. Data Scientist (~164k) 	 IT Support Specialist There are two driving forces behind this ask: A. Increase in District Office IT support needs. B. Increased support burden of key systems/areas such as Employee Email, Student Email, Account provisioning, Account conversions, Device management, Device security and compliance, HR related access requests Related to District Office IT support needs, a significant increase in employees, programs and events at the District Office has increased the need for additional on-site technical support resources. We have seen an increase of meetings and events at the District Office, which has increased the number of event support requests, often times after normal business hours. We have seen a 20% increase in help desk cases between 2020 and 2024. 		

3) Employees still working remote
or hybrid schedules has added
an extra level of complexity and
work load to our support team.
4) Our support team members
have been asked to take on
additional duties, namely
account name
changes/conversions This has
increased the number of
support requests we receive,
with that one category
accounting for over 27% of the
cases the team completed over
the last fiscal year.
5) We have had to rely on other
members of our IT team to help
keep our case load manageable,
which has taken them away
from their normally assigned
duties and projects, and has also
proven to be an employee
morale issue.
6) Adding an additional Systems
Support Specialist I (SSS I) to the
team will help with the
increasing need for technical
support at the District Office. It
will also allow for coverage
when our other team members
are out due to illness or
vacations. We feel it will also
offer a boost to employee
morale, as having an additional
help desk team member will
allow the other IT staff members
who have been helping the help
desk to focus on their regularly
assigned duties and projects
without feeling overworked.
7) There is an increase in project
and infrastructure

		 maturity/capability to provide users experience. The position will allow for prioritization of efforts for projects .An example, is the deployment of Intune that will streamline images, security standards, patching, application deployment, and standardize user experience. 8) The increase in account compromises and name changes has also increased the amount of workload. Security Engineer 	
		 An increase in security threats and would enable an increase in the number of endpoints across the environment. New technologies that are being added to the environment also need to be monitored and 	
		processes developed to respond to threats. Data Scientist We have a growing AI presence with the fraud application and the course recommendation work. Some concern that operationally we might not be able to support these or the expansion going forward without a similar position.	
Professional Development: Describe briefly, the effectiveness of the professional development your unit will be engaged in (either providing or attending) during the next cycle	 1: Provide Professional Development 2: Attend Professional Development (~70k) 	Management/Leadership development, training due to turnover, and support for SaaS transition.	
Facilities: If your unit receives a building remodel or renovation, additional furniture or beyond routine maintenance, explain how this request or requests will	 1: Space Allocation 2: Renovation 3: Furniture 4: Other 5: Beyond Routine Maintenance 		

impact your unit's service to the		
colleges.		

Section Seven: Resources (cont.)

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: 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.	 1: Replacement Technology 2: New Technology 3: Software 4: Other Reporting System / Implementation (~400k: ~300k One-Time, ~100k Ongoing) Site Cabling Plant Assessment, Upgrades and Expansion (~400K: One-Time) Identity Management Service (~800K: 800k Ongoing) 	 Reporting System/Implementation New systems to replace cognos/ODS functionality. Cabling: There is a need to assess, identify gaps and start on projects related to fiber and copper cabling infrastructure at most KCCD sites. 		
Other Equipment: 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.	1: Replacement 2: New 3: Other	allocation: \$ 2,121,000		

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):

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 to the colleges. This will allow us to provide more resources 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.

The move to SaaS solutions is the next phase of the plan to increase service and reduce costs.

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.

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 and technology change, state requirements changing, and process review and improvement.

Looming budget challenges need to be considered and how technology will be utilized throughout the district. We will need to review what technology is essential and look for opportunities to be more effective with our systems and applications. A key consideration is reviewing systems that have overlapping functionality for decommission and looking to a return to standardized solutions to reduce overhead.

DO IT continues to face staffing challenges, but offering remote work has helped. We have lost several key employees to higher pay for lateral or even lesser positions to other public/higher ed organizations – IT salaries should be reviewed for competitiveness. Offering fully remote work has yielded qualified candidates for positions that have been historically difficult to hire locally. We are currently working with HR to pilot out of state remote and believe that will further benefit the quality of candidates that will help us meet the growing demand for IT services.

Routing and Review

Date of Presentation to Administrative/Consultation Council: