2020-2021

Kern Community College District

District Office Administrative Unit Review

Information Technology

Enter Name: Gary Moser

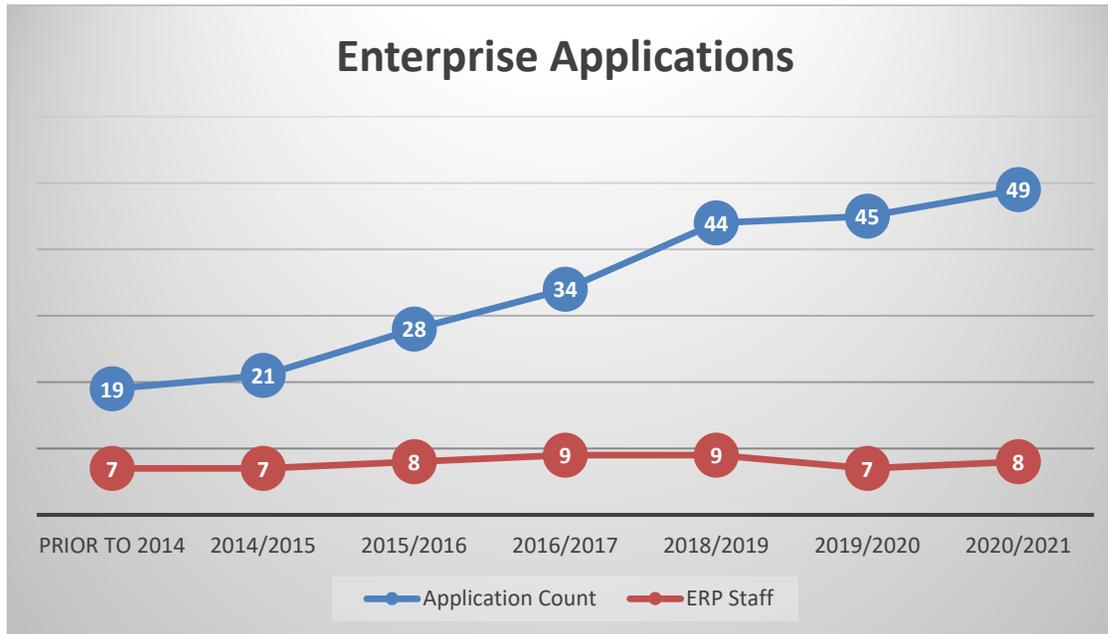Enter Title: VC IT\CIO
Submitted by: Gary Moser

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 DO IT staff is very dedicated and talented as we continue with transitioning to newer technologies such as Software as a Service (SaaS).

➢ The relationship between the District Office IT and the Colleges IT departments is a strength in supporting our students, faculty, and staff.

➢ Current IT staffing levels are down 11% overall and in Enterprise Applications **staffing level is down 22% most of this past year!**

➢ 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:

  o Technology Applications growth (19 to 49) since 2014 increased to 61%. This past year alone increased by 12%.
  o FTE growth (19,690 to 24,248) over the last 5 years increased almost 19%

➢ 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 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.

  o 3 new college IR offices are a 300% increase since 2017

➢ 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 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.

Enterprise Applications

	PRIOR TO 2014	2014/2015	2015/2016	2016/2017	2018/2019	2019/2020	2020/2021
Application Count	19	21	28	34	44	45	49
ERP Staff	7	7	8	9	9	7	8

Key indicators

Current overall department staffing level is down 11%

Enterprise Applications staffing levels are down 22%.

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 <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

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 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 our plan 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 business 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.

Focused hiring in the critical area of Enterprise Applications are essential to effectively use technology to meet our colleges and DO requests. Demand for IT services necessitates increasing staffing levels to meet this demand. In comparison to other Banner districts we are below staffing levels, and some are by a significant margin, inhibiting us from responding timely, effectively, and efficiently to our college's requests for services.

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.

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

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

- Project Planning
- Project Coordination
- Project Risk Mgmt
- Communications
- Project Mgmt Training

Administrative Assistant
Cynthia Munoz

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

Director of IT Security (K)
Steven Alexander

- Assessment - Risks, Threats, Technologies
- Security Strategy
- Incident Reponse
- 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 (H)
Stephen Kegley

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

Director of IT Infrastructure (I)
Eddie Alvarado

- Networks (LAN, Wi-Fi, 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.)
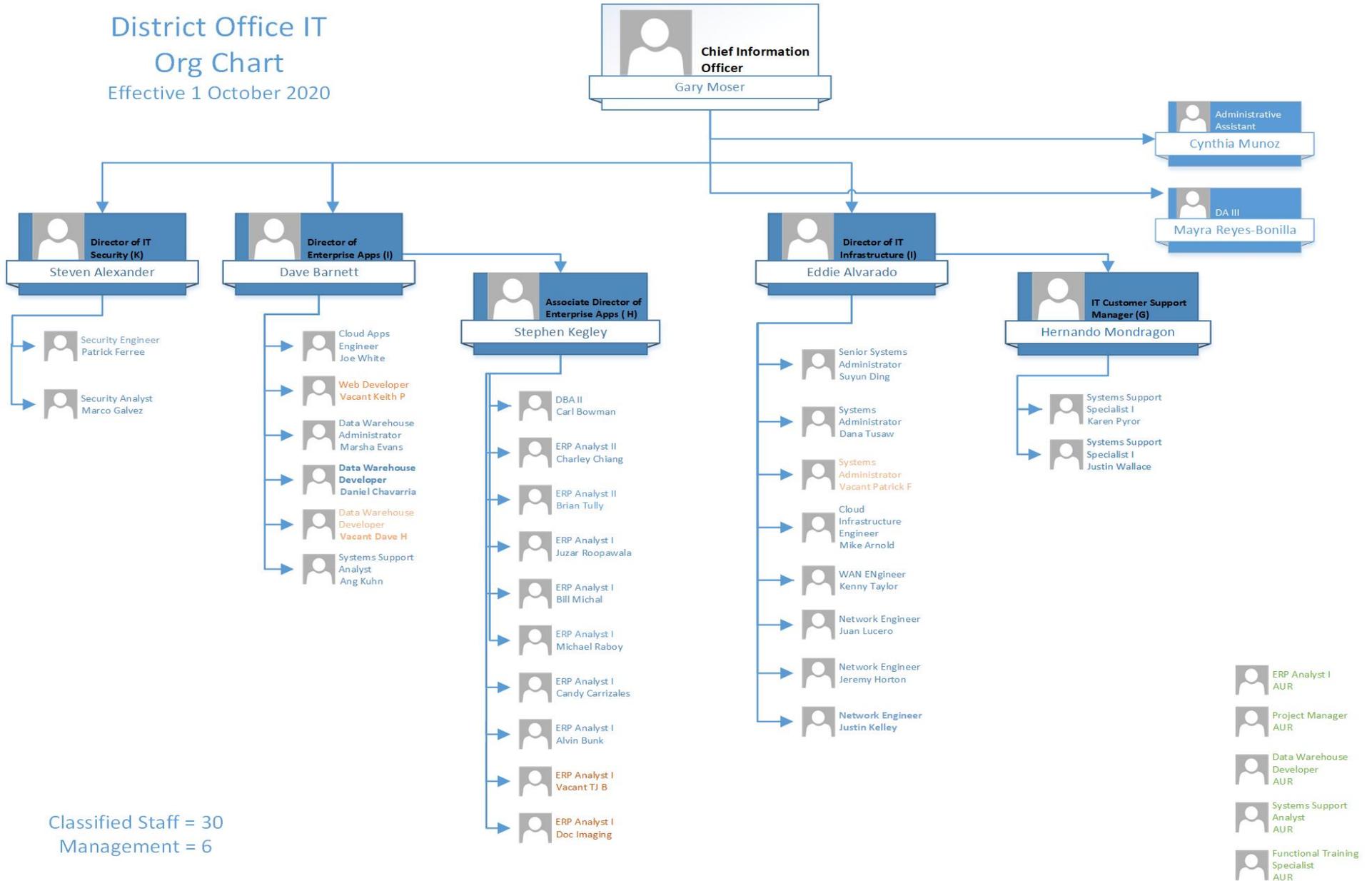- Disaster Recovery
- Business Continuity

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

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
Effective 1 October 2020

Chief Information Officer
Gary Moser

Administrative Assistant
Cynthia Munoz

DA III
Mayra Reyes-Bonilla

Director of IT Security (K)
Steven Alexander

- Security Engineer
  Patrick Ferree
- Security Analyst
  Marco Galvez

Director of Enterprise Apps (I)
Dave Barnett

- Cloud Apps Engineer
  Joe White
- Web Developer
  Vacant Keith P
- Data Warehouse Administrator
  Marsha Evans
- **Data Warehouse Developer**
  Daniel Chavarria
- Data Warehouse Developer
  Vacant Dave H
- Systems Support Analyst
  Ang Kuhn

Associate Director of Enterprise Apps (H)
Stephen Kegley

- DBA II
  Carl Bowman
- ERP Analyst II
  Charley Chiang
- ERP Analyst II
  Brian Tully
- ERP Analyst I
  Juzar Roopawala
- ERP Analyst I
  Bill Michal
- ERP Analyst I
  Michael Raboy
- ERP Analyst I
  Candy Carrizales
- ERP Analyst I
  Alvin Bunk
- ERP Analyst I
  Vacant TJ B
- ERP Analyst I
  Doc Imaging

Director of IT Infrastructure (I)
Eddie Alvarado

- Senior Systems Administrator
  Suyun Ding
- Systems Administrator
  Dana Tusaw
- Systems Administrator
  Vacant Patrick F
- Cloud Infrastructure Engineer
  Mike Arnold
- WAN ENgineer
  Kenny Taylor
- Network Engineer
  Juan Lucero
- Network Engineer
  Jeremy Horton
- Network Engineer
  Justin Kelley

IT Customer Support Manager (G)
Hernando Mondragon

- Systems Support Specialist I
  Karen Pyror
- Systems Support Specialist I
  Justin Wallace

- ERP Analyst I
  AUR
- Project Manager
  AUR
- Data Warehouse Developer
  AUR
- Systems Support Analyst
  AUR
- Functional Training Specialist
  AUR

Classified Staff = 30
Management = 6

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 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) - Active Directory - Email - SharePoint - OneDrive - Teams Backend Video Conferencing		
IT Customer Support Manager	- Oversee the delivery of effective IT Help Desk Services 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		

	- 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)	- 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		Network Switches: 255 Wi-Fi Access Points: 556 Wi-Fi Controllers: 14 (See Attached Diagram – in same Directory) Telephone Switches: 35 Telephones: 1700 Security Cameras: 200 Telecom Carriers: 7
WAN Engineer	- 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.		Sites: 11 Network Routers: 18 (See Attached Diagram – in same Directory) Video Conf Rooms: 25
Cloud Infrastructure Engineer	- Senior/Team lead for Networking group - Cloud Networks for Amazon Web Services (AWS) Cloud environment - Cloud Security Infrastructure for AWS		
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: 360 Servers/Apps in the Cloud: 60 Total Storage: 450TB

Systems Administrator (2)	- 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...)		Employee Email Accounts: 5400 SharePoint Sites: 165 Student Email Accounts: Approximately 40,000 Email Lists (listservs): 525 Misc Applications: Approximately 30
Systems Support Specialist I (2)	- 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. - 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)		Annual # of Help Desk Calls: 6,000 District Office PCs: 100 District Office Conf Rooms: 12 Labs/Classrooms Supported: 13

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	- 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.	Reviews/validates security controls for new IT projects. Technical lead for security incident response.	
Security Specialist	- Technical lead on SSO/IAM projects. - Respond to security incidents involving compromised accounts. - Respond to tickets related to accounts and SSO.	Assist with wide range of IT security functions.	New (reclassified position).
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	- 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 | - 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
- 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
- Canvas
- Interim Portal
- AccuSQL
- eTranscripts
- Credentials Inc
- Barnes & Noble
- eLumen
- EAB Navigate / Advise
- Blackboard Connect (Emergency Texting)
- Blackbord Help Desk
- Rydin Parking System | 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 | |

	- 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		
Systems Support Analyst	- Assist with lower level technical support for the systems above, specifically: - Banner Document Imaging - Canvas	Documentation User Support Report Writing Running Scripts	
Data Warehouse Developer/Admin	- 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	- AWS Cloud Application Architecture - Research and Development - Web Development Lead - Web Developer Duties below	Content Editing Troubleshooting Documentation.	
Web Developer	- Websites (Drupal) Content Management System Support - www sites, committees sites, grants sites - Middleman Static Site Support - System Integrations with Web Sites	DO Content Support Design Documentation Custom Web Dev.	

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

1. Applications
 	
Applications meet availability reflected by annual standards.
 	
Applications are updated and meet version requirements.
 	
Meets Federal and State compliance requirements.
 	
Applications and integrations are supported and available
	Goal 6 – Strengthen Organizational Effectiveness	2019-2020	Annual Metrics
			
			  a. Application Uptime
			  b. Upgrade/Patch Quantity & Dates
			  c. Regulatory Data Submission Dates
			
			Integrations
				Application uptime reflects annual standard of 99%.
				
				Meets current update and version requirements for applications.
				
				Federal and State Compliance requirements are current.
				
				Integrations are maintained and accessible

2. Infrastructure Network uptime reflects our annual standards System uptime reflects our annual standards Systems and network meet update and compliance requirements. Helpdesk tickets are resolved in a timely fashion	Goal 6- Strengthen Organizational effectiveness	2019-2020	Annual metrics a) Network up-time b) Systems up-time c) Upgrade\Patch completed d) Helpdesk calls received\resolved timeline	Network uptime reflects our annual standards of 99%. System uptime reflects our annual standards of 99%. Meets current update and version requirements for applications. Helpdesk call resolution meets industry standards
3. Security 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	Goal 6 – Strengthen Organizational Effectiveness	2019-2020	Annual Metrics 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	District wide audit and remediation completed. Up to date and effective training programs are provided. Up-to-date BPs, APs, and/or internal procedures Standards are updated and applied.

4. Project management Provide an effective technology project management process. Coordinate people, vendors, and resources to achieve a successful and timely conclusion. Provide a transparent and timely project reporting process.	Goal 6- Strengthen Organizational effectiveness	2019-2020	A submission process for new technology related requests Project completed within estimated time requirements. Project completed within budget estimates. A cost/benefit analysis process for submission of new systems and applications.	Provide an effective technology project process. Projects are completed on time and within budget Accurate and timely project reporting method.
5. Strategic planning Provide for new\innovative technology solutions. Develop a proactive research and development process Provide a Technology Master Planning document	Goal 6- Strengthen Organizational effectiveness	2019-2020	District Technology Advisory Committee feedback Review proposed new systems and applications to meet district technology needs. Assess plans, recommendations, and future technology requests. Use the governance process to review a district wide technology plan	A Process for district stakeholders in submission of technology recommendations. Increased functional\technical process improvements 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

A governance process was updated and approved through the district decision making process and implementation in spring 2020.
Regular meetings with technology committees to assess IT issues 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.

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
myBanWeb Uptime	99.95%	99.95%	99.85%	99.97%
www (bc,cc,pc,do) website uptime	>99.999%	>99.999%	>99.999%	>99.999%
Applications implemented past 5 years – (2014 count was 21)	36	44	45	49
FTES Growth over 5 years – affects all systems, networks, applications district wide - up 19%.	5.21%	5.58%	7.74%	-1.24%
% of Staff who have received security awareness training.	N/A	9.2% Online	9.6% Online	10.8 %
Average # of outstanding High/Critical vulnerabilities	N/A	326 High	120 H\40 C	216 H\59 C
Average # of High/Critical vulnerabilities > 90 days old	N/A	275 High	168 High	135 H\16 C
Help Desk – Tier 1: Average speed to answer initial phone call	90% <= 90sec	90% <= 90sec	88%	92%
Help Desk – Tier 1: Average post call random survey scores (scale 1 to 5)	4	4	4.2	4.4
Help Desk – Tier 1: First Call Resolution Rate	80%	80%	69%	77%
Network Uptime	99.9%	99.9%	99.9%	99.9%
Systems/Server Uptime	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

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.

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 at more KCCD sites.	1,3,6	☒ Completed: _____ (Date) ☐ Revised: _____ (Date) ☐ Ongoing: _____ (Date)	Configured VPN redundancy at PC and CC-Edwards	All	
WAN Capacity Increases	6	☐ Completed: _____ (Date) ☐ Revised: _____ (Date) ☒ Ongoing: _____ (Date)	Delayed to due CCCCO funding freezes. Will continue as goal in the next evaluation period.		Risk Management
Outdoor Wi-Fi	3,6	☒ Completed: _____ (Date) ☐ Revised: _____ (Date) ☐ Ongoing: _____ (Date)	Design and Engineering complete. Implementation ongoing. Priority: Parking Lots.	All	Bond (BC), Other sites (DO IT GUI)
Emergency Communications Phase 1 and 2	3,6	☐ Completed: _____ (Date) ☐ Revised: _____ (Date) ☒ Ongoing: _____ (Date)	Testing and buildout work done, more testing needed prior to district wide rollout.		Risk Management
Help Desk: Increase first-call resolution to more than	3,6	☐ Completed: _____ (Date) ☐ Revised: _____ (Date) ☒ Ongoing: _____ (Date)	First-call resolution rate increased by 8% to the current level of 77%.	IT Directors	DO IT Directors

70% Increase customer Help Desk interactions by 10%			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.		
Cloud Migration WAVE 1	#6	☒ Completed: _____ (Date) ☐ Revised: _____ (Date) ☐ Ongoing: _____ (Date)	Applications slated for migration in 19/20 were completed.		DO IT Directors
Implement district security program plan	#6	☐ Completed: _____ (Date) ☐ Revised: _____ (Date) ☒ Ongoing: _____ (Date)	We are continuing to execute on the plan for our security program.		DO IT Security
Comprehensive security policies and standards	#6	☐ Completed: _____ (Date) ☐ Revised: _____ (Date) ☒ Ongoing: _____ (Date)	We have proposed comprehensive standards and implemented cloud security standards.		DO IT Security
Implement endpoint security monitoring	#6	☐ Completed: _____ (Date) ☐ Revised: _____ (Date) ☒ Ongoing: _____ (Date)	Moved to CrowdStrike as our AV Replacement/ endpoint security software and deployment is now an ongoing program as we roll out new devices.		DO IT Security

Implement Banner 9 Phase 2 – in the cloud	#6	☒ Completed: _____ (Date) ☐ Revised: _____ (Date) ☐ Ongoing: _____ (Date)	Complete on time		DO IT Systems Maintenance
Implement District Data Warehouse Project.	#6	☐ Completed: _____ (Date) ☐ Revised: _____ (Date) ☒ Ongoing: _____ (Date)	Waiting on signoff for Phase 1. Phase 2/3 IT work is underway.	Bakersfield College	DO IR Department
Banner 9 – Phase 3 – SSB Updates/ITIL/etc.	#6	☐ Completed: _____ (Date) ☐ Revised: _____ (Date) ☒ Ongoing: _____ (Date)	SSB installed March 2019, still in testing/validation stage. Some SSB apps not - complete.		DO IT Systems Maintenance
OEI Phase 1	#6	☒ Completed: _____ (Date) ☐ Revised: _____ (Date) ☐ Ongoing: _____ (Date)	In production environment in August 2020		VP
Cognos Upgrade	#6	☒ Completed: _____ (Date) ☐ Revised: _____ (Date) ☐ Ongoing: _____ (Date)	Complete – Reporting software application		DO IT Systems Maintenance
ODI Upgrade	#6	☒ Completed: _____ (Date) ☐ Revised: _____ (Date) ☐ Ongoing: _____ (Date)	Complete – upgrade of ODS data warehouse.		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.)
WAN Failover	4, 6	Add VPN failover capability to CC-IWV, CC-Bishop and CC-Mammoth	ALL	
WAN Capacity Increases	4, 6	Complete Phase 1 connection upgrades as approved/funded by CCCCO	ALL	
Outdoor Wi-Fi	1, 4, 6	Continue implementation as prioritized by the Colleges. This goal spans multiple years.	ALL	
Emergency Communications (aka Mass Notification)	4, 6	Finish phone deployments and implement integrated system.	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	ALL	

Help Desk: Promote and solicit suggestions for the self-help portal located at http://support.kccd.edu. Ensure that our Knowledge Base (KB) articles contain the most accurate and current information possible.	6	We have made many additions and improvements to the help articles on the self-help portal since we have transitioned to remote work, and promoting the existence of the site and articles is helpful in ensuring help desk requests are for legitimate technical issues instead of basic user error. The Level 1 help desk agents (Blackboard) utilize these KB articles regularly, and making sure they have the most current and accurate information is helpful in increasing our first-call resolution rate and allowing our local IT staff to concentrate on more pressing issues and projects.	ALL	
Increase remote device management capabilities	6	Improve/Streamline Device management (Patching, Security) for supporting remote workforce. (InTune)	ALL	
Cloud Migrations WAVE 2	1, 6	Complete WAVE 2 (20/21) of application migrations to the Cloud (Amazon Web Services)	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 SSO System	#6	We are in the process of migrating to Portal Guard.		DO IT Security.

Information Technology

Phase 1 Deployment of two-factor authentication	#6	MFA/2FA implemented for O365 for remote workers at the District Office, Porterville College, and Cerro Coso Community College. We will implement MFA at Bakersfield College in October 2020.		DO HR. DO IT Security.
Cloud Security	#6	Establish comprehensive procedures and standards for cloud security.		DO IT
User Awareness Training	#6	Establish a training program for new hires at DO, PC and CC. Program established at BC.		DO IT
Banner Standardization	#6	Plan in development with third party partner.		DO IT – systems maintenance
Structured Patching/Testing/Release Cycles with Ellucian Cloud	#6	Complete		DO IT – systems maintenance
Document Imaging	#6	RFQ completed. A&R, FinAid, and executive offices complete. HR live Oct 2020, Business Services live Nov 2020. Project Complete Spring 2021	BC, PC, CC	DO HR, DO Business Services, DO Chancellor's Office
OEI Phase 2	#6	Facilitate integration with CVC-OEI partner Quotly via approved integration method.	BC, PC, CC	Chancellor's Office
DegreeWorks Upgrade	#6	Upgrade DegreeWorks to supported 5.x version.	PC, CC	DO IT – systems maintenance

Information Technology

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 DA III	ERP Analyst II (2)	Data Warehouse Administrator
	Director of IT Infrastructure	ERP Analyst I (6)	Systems Support Analyst
	Director of Enterprise Applications	Cloud Infrastructure Engineer	WAN Engineer
	Director of IT Security	Cloud Applications Engineer	Network Engineer (3)
	Associate Director of Enterprise Applications	Security Engineer	Senior Systems Administrator
	IT Customer Support Operations Manager	Web Developer	Systems Administrator (3)
	Security Analyst	Systems Support Specialist I (2)	
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)	$ 3,422,445	
3000 (Employee Benefits)	$ $1,672,054	
4000 (Supplies & Materials)	$ $21,800	
5000 (Operating Expenses and Services)	$ $6,083,055	
6000 (Capital Outlay)	$ $785,400	
7000 (Other Outgo)	$	
Budget (Unrestricted) Total	$ 11,984,753	
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. Wi-Fi Project - Outdoor
2. Doc Imaging
3. Ad Astra

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: *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.ERP Analyst (~100k) 2.Project Manager (~140k) 3.Data Warehouse Developer (~100k) 4.Systems Support Analyst ~(80k) 5.Functional Training & Report Writing (~70)	• District FTE & Systems Growth • Extensive backlog of requests & integrations for colleges • Research Data Warehouse & IR Staff Increase at all colleges • Project mgmt. coordination, planning, and process is needed • Staffing levels significantly lower compared with other like districts. • IR departments now at all colleges and need to support them • Increased operational reports are being requested.		1
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 (~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.		2
Facilities: *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.*	☐ 1: Space Allocation ☐ 2: Renovation ☐ 3: Furniture ☐ 4: Other ☐ 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: *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_____			
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_____			
Total cost of resource needs over and above current budget allocation:	$ 540,000			

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.

The remote work impact caused us to shift very quickly last spring and our staff did an excellent job! We have further work to do to augment our students' access to technology to help meet their educational goals. This also 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. New security challenges must also be addressed in providing this service.

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 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.

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 these objectives IT will continue to work with representative groups to address the needs for the district. Also the significant IT staffing shortages this past year 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.

Routing and Review

Submitter's Name: <u>Gary Moser</u>

Title: <u>VC IT\CIO</u>

Submitter's Signature: _____

Date Submitted: _____

Submitter's Immediate Supervisor: _____

Date of Review: _____

Chancellor's Signature: _____

Date of Review: _____

Date of Presentation to Administrative/Consultation Council:_____