2018-2019

Kern Community College District

District Office Administrative Unit Review

Information Technology
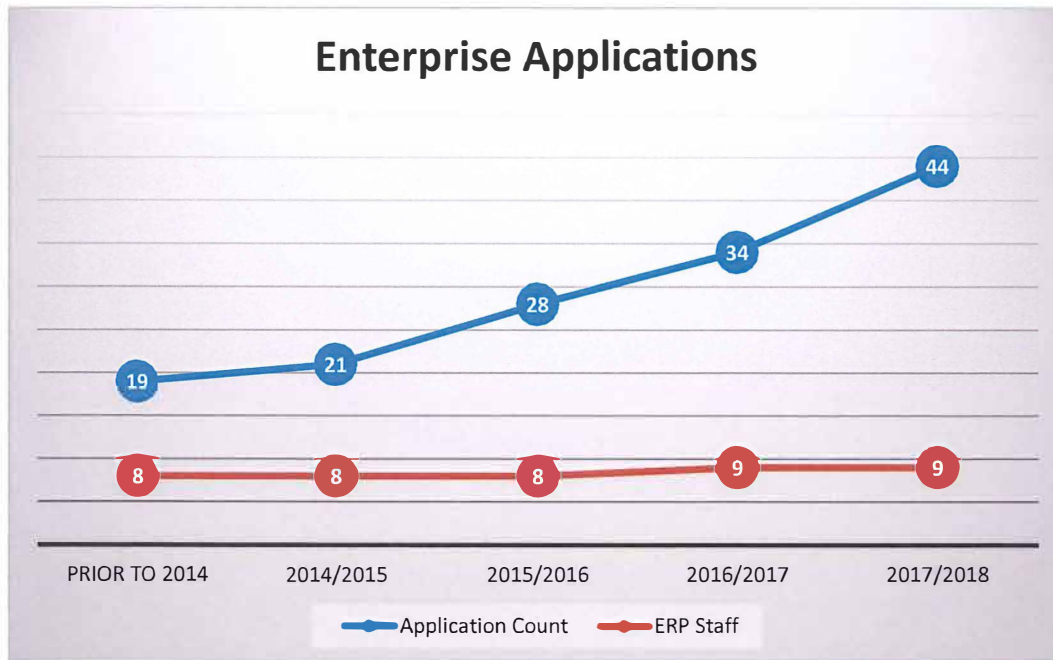
Manager's Name: Gary Moser

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, newer technology must be used to move us from a maintenance to a service based organization. To accomplish this, our plan is a "Cloud First" solution for our technology.

➤   The DO IT staff is very dedicated and talented and will be able to transition to newer technologies.

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

➤   Enterprise Applications have a significant and constantly increasing permanent work load for technology projects due to growth of new requirements, grants, and state projects. Staffing to address current and projected growth needs to be addressed. Key indicators are:
  •   FTE growth (19,690 to 24,549) over the last 5 years increased almost 20%
  •   Applications growth (21 to 47) over the past 5 years is over 53%.

➤   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 this year's new requirements:

  •   20 new system applications being requested to add to the current level (47) of support – additional 42% increase this year alone.

➤   Data Warehouse staff is needed to support the growth of Institutional Research staff. Each college now has an IR office with data requirements and information needs. The current staffing level in place was designed for only a district IR department. Operational reporting is also provided by DO IT analysists.

  •   3 new college offices are a 300% increase

➤   Technology consulting costs for major projects this year alone increased by over $1,347,000.

➤   Technology project management to support current and future technology increases\changes is needed in the district. The design, planning, and coordination of multiyear projects to support new\expanding requirements include the promise grant, guided pathways, and state applications.

➤   The security program for our district is in progress due the addition of a Director of IT Security. A significant amount of work needs to be done to help reduce threats, cloud operations, compliance requirements, end user education, and security prevention techniques of our systems.

➤   Key committees are essential to support the colleges. These include IT Directors meeting, Banner Steering Committee, and the District Technology Advisory Committee.

➤   Technology solutions are needed for DO departments to support the colleges: faculty\staff reporting, contracts, dual enrollment, etc.

Enterprise Applications

	PRIOR TO 2014	2014/2015	2015/2016	2016/2017	2017/2018
Application Count	19	21	28	34	44
ERP Staff	8	8	8	9	9

Added Growth

20 additional applications are being requested since September alone!

This would increase this to an overall total of 64 applications on the chart.

No additional staff are funded for the new requests coming 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. Initial applications requested for this year are increasing by over 20 new applications 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 the colleges and district office are Enterprise Resources Analyst and System Support Analyst.

Work ongoing to support each Application

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

a) How will your unit address internal and external trends in the next 3-5 years? *[how will the unit respond and improve in the future]*

The IT unit will continue its efforts to enhance, explore, secure and implement systems and applications to address our districts educational and business goals through the use of advanced technology focusing on "cloud first" solutions. Planning, designing, and implementing the automation of processes will be essential in addressing and expanding applications to meet and exceed all our college's requests. Technology evolution and growth are constant and with our move to the cloud our plan for efficiencies and cost containment are paramount goals as part of a solution.

We will continue to support the state wide initiatives in technology that will help provide solutions that are supportive of our KCCD students. Key initiatives include 4CIS (pilot concept of 3 districts developing a statewide cloud based ERP solution), Data Warehouse, and Guided Pathways.

We will need to address this by hiring staff to support new technology research and development to address our customer's business processes and requirements as implementation specialists and functional business process partners. Having the right IT staffing levels with appropriate skills will allow us to increase our districts efficiencies via automation allowing KCCD staff to focus on students and address continuous growth by developing and implementing the next generation technologies in parallel.

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

To support current and future growth for college driven systems support needs, Information Technology must reorganize our organizational and structural environment and continue moving to a "cloud" first approach with our current and future applications requirements.

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

- Cloud adoption for our technology portfolio
- Continue our new technology governance structure
- Communications process enhancements
- A stable and secure technology environment
- Address critical positions staffing levels and training
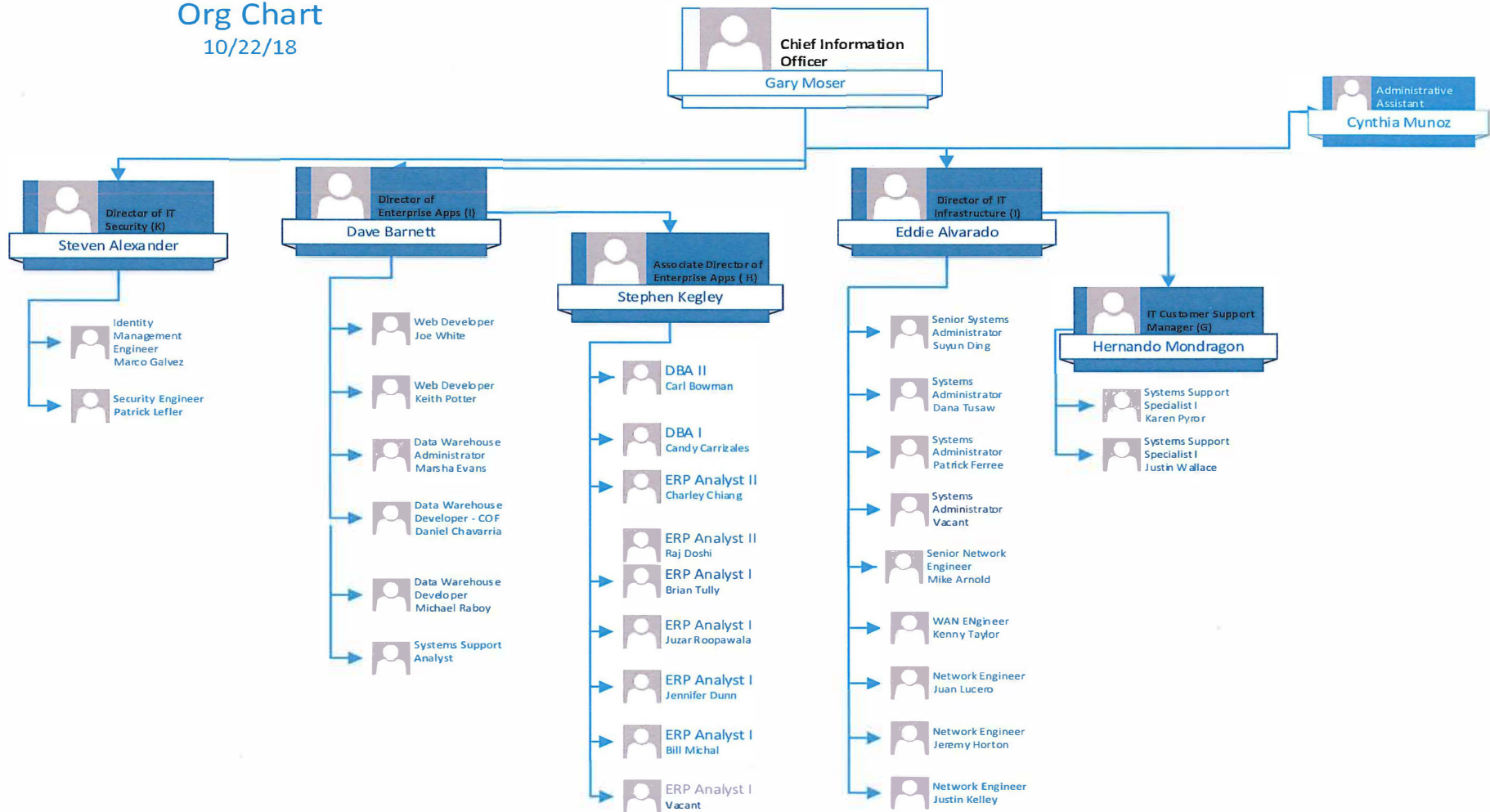
Section One: Unit Overview

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 will be an enabler of solutions. The District Office of Information Technology will 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.
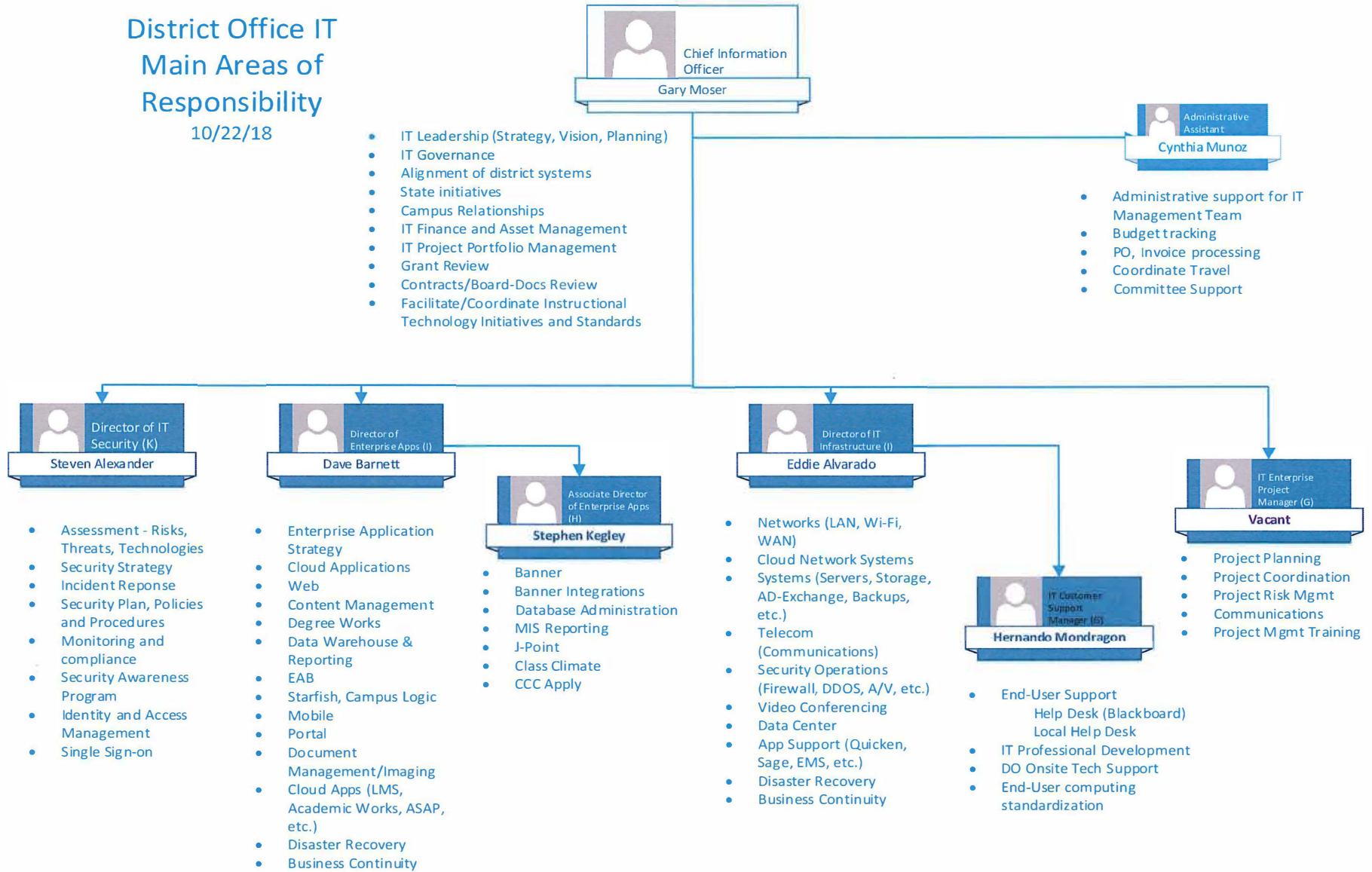
b) How is the unit structured within the district? Modify the org chart template below to illustrate the unit's organization.

District Office IT
Org Chart
10/22/18

Chief Information Officer
Gary Moser

Administrative Assistant
Cynthia Munoz

Director of IT Security (K)
Steven Alexander

Director of Enterprise Apps (I)
Dave Barnett

Director of IT Infrastructure (I)
Eddie Alvarado

Associate Director of Enterprise Apps (H)
Stephen Kegley

IT Customer Support Manager (G)
Hernando Mondragon

Identity Management Engineer
Marco Galvez

Security Engineer
Patrick Lefler

Web Developer
Joe White

Web Developer
Keith Potter

Data Warehouse Administrator
Marsha Evans

Data Warehouse Developer - COF
Daniel Chavarria

Data Warehouse Developer
Michael Raboy

Systems Support Analyst

DBA II
Carl Bowman

DBA I
Candy Carrizales

ERP Analyst II
Charley Chiang

ERP Analyst II
Raj Doshi

ERP Analyst I
Brian Tully

ERP Analyst I
Juzar Roopawala

ERP Analyst I
Jennifer Dunn

ERP Analyst I
Bill Michal

ERP Analyst I
Vacant

Senior Systems Administrator
Suyun Ding

Systems Administrator
Dana Tusaw

Systems Administrator
Patrick Ferree

Systems Administrator
Vacant

Senior Network Engineer
Mike Arnold

WAN ENgineer
Kenny Taylor

Network Engineer
Juan Lucero

Network Engineer
Jeremy Horton

Network Engineer
Justin Kelley

Systems Support Specialist I
Karen Pyror

Systems Support Specialist I
Justin Wallace

District Office IT Main Areas of Responsibility
10/22/18

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

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

IT Enterprise Project Manager (G)
Vacant

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

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. Specify the time-period in which each AUO will be assessed (focus on 1 to 3 assessments per year). Describe the method of assessment and the criteria used to determine success.

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	2017-18	Annual metrics a. Applications up-time b. Upgrade\Patch quantity and dates c. Regulatory data submission dates d. Applications and integrations are supported	Applications uptime reflects annual standard of 99%. Meets current update and version requirements for applications. Federal and State compliance requirements are current. Applications and integrations 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	2017-18	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's are coordinated district wide User security training programs are provided Implementation\currency of BP's, AP's and\or internal procedures. NIST security standards are provided for technology	Goal 6- Strengthen Organizational effectiveness	2017-18	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's completed Up to date and effective training programs are provided Up to date of BP's, AP's and\or internal procedures. NIST standards updated and applied

4. Project management Provide an effective technology project management process. Coordinate people, vendors, and resources to achieve a successful conclusion. Provide a transparent and timely project reporting process.	Goal 6- Strengthen Organizational effectiveness	2017-18	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	2017-18	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 providing details regarding findings and plans for change or improvement.

Systems and applications have maintained the availability goal
A governance process has been proposed and approved for implementation in spring 2018.
Regular meetings with technology committees to assess IT issues and improve communications have been implemented.

Section Three: Key Performance Indicators (KPIs)

a) **List the KPIs for the unit along with the relevant outcomes for the last 3 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)	2015-16	2016-17	2017-18
myBanWeb Uptime	N/A	99.95%	99.95%
www (bc,cc,pc,do) website uptime	N/A	>99.999%	>99.999%
Applications implemented past 5 years – (2014 count was 21)	28	36	44
FTES Growth over 5 years – affects all systems, networks, applications district wide - up 20%.	5.21%	5.58%	7.74%
% of Staff who have received security awareness training.	N/A	TBD	9.2% online
Average # of High/Critical vulnerabilities > 90 days old	N/A	TBD	24 critical, 275 high
Average # of outstanding High/Critical vulnerabilities	N/A	TBD	41 critical, 326 high
Help Desk – Tier 1: Average speed to answer initial phone call	N/A	90% <= 90sec	90% <= 90sec
Help Desk – Tier 1: Average post call random survey scores (scale 1 to 5)	N/A	4	4
Help Desk – Tier 1: First Call Resolution Rate	N/A	80%	80%
Network Uptime	N/A	99.9%	99.9%
Systems/Server Uptime	N/A	99.9%	99.9%

b) **Summarize any changes or findings.**

The information shared was changed to share the impact of students, faculty, staff and systems growth in the district. The intention is to show that there has been a significant uptick in demand for IT services and solutions. This includes research & development, User planning & project management, implementation of new applications and services, grant & categorical requirements, and increasing ongoing maintenance of systems.

a) **List the Goals from the prior year**. Indicate the status and list an anticipated completion date if not complete. Were unit outcomes met and/or what findings were realized in the process? [*starting in 2017-18, this will relate directly to the goals and outcomes listed in section five*]

Prior Goals	Status	Strategic Plan Alignment	AUO Alignment	Outcomes and/or Findings
Campus Logic Banner Integration	Completed	Goal 6	1	User signoff received in November 2017.
Starfish.	In-Progress	Goal 6	1	Currently being worked on for functional users.
eLumen SLO Assessment and Curriculum	Completed	Goal 6	1	Completed - User signoff received.
Develop and adopt baseline security standards	In-Progress	Goal 6	3	Standards for networking developed and implemented, SSL developed and partially implemented, Windows/AD done
Develop the capability to quickly respond to, assess and remediate security incidents	In-Progress	Goal 6	3	products for security detection and response and recently purchased and continue through 2018
Build Disaster Recovery site for key IT services including Banner (Phase 1)	Completed	Goals 1,3,6	1,2	Goal was completed.
Expansion of Wi-Fi Networks at Bakersfield College	In-Progress	Goals 1,3,6	1,2	Increase instructional spaces throughout the BC campus with the Measure J Bond.
Emergency Paging for Classrooms District Wide (Phase 1)	In-Progress	Goal 6	1,3	Enabled improved communication to students and staff during emergency incidents. Systems in place.
Implement Cloud First technology and systems solution planning process	In-Progress	Goal 6	1,2	Design, Planning and Implementation in building KCCD's Cloud presence utilizing Amazon Web Services.
Implement district security training and user awareness program	in-progress	Goal 6	3	We conducted initial training and released materials. Online training is available. Usage is low
Implemented Banner 9	Completed	Goal 6	1	Completed upgrade early.
Finalize eLumen Data Integration solution	Completed	Goal 6		Completed
Implement Phase 1 of Document Imaging	Completed	Goal 6	1	Completed
Add fail-over Internet Connection at the DO.	Completed	Goal 6	2, 4	Completed
Migrating Employee Email to Office 365	Completed	Goal 3, 6	2, 4	Completed

Section Five: Goals for the Upcoming Year

a) **Identify annual goals for the unit.** Describe how progress toward the goals will be measured during the upcoming year. Describe the target to be met during the year and the timeframe for completion. Specify how the unit goals align with the goals and objectives outlined in the districtwide strategic plan and the unit's AUOs. Indicate whether additional resources will be needed. [*just a Yes or No – these will be described in section seven*]

Unit Goals	Assessment Method	Annual Target and Timeline	Strategic Plan Alignment	AUO Alignment	Resources Needed (Yes/No)
1) Complete prior year goals not yet completed	Project Implementation	June 30, 2019	Goal # 6	1-6	Yes
2) Implement Cloud First technology and systems solution planning processes	Project Implementation	June 30, 2019	Goal #1, 6	1-6	Yes
3) Implement Banner 9 Phase 2 - in the cloud	Project Implementation	December 31, 2018	Goal #6	1, 4, 5	Yes
4) Implement district data warehouse project.	Project Implementation	March 30, 2020	Goal #6	1, 4, 5, 6	Yes
5) Implement Banner 9 Phase 3 – SSB updates\ITIL\etc.	Project Implementation	December 30, 2019	Goal #6	1	Yes
6) Implement district security program plan	Project Implementation	June 30, 2019	Goal #6	3, 5	No
7) Continue with 4CIS ERP system consortium	Project Implementation	June 30, 2021	Goal #1,3,6	3	Yes
8) KCDD Site-to-Site Network Connections Failover Improvements	Project Implementation	June 30, 2019	Goal #1,3,6	2, 4	Yes
9) Emergency Communications (Phase 2)	Project Implementation	June 30, 2019	Goal #6	2, 4	Yes
10) Comprehensive security policies and standards	Project Implementation	December 31, 2019	Goal #6	3	Yes
11) Implement endpoint security monitoring.	Project Implementation	June 30, 2019	Goal #6	3	Yes
12) Achieve 95% Indoor Wi-Fi Coverage District Wide	Project Implementation	June 30, 2019	Goal #3,6	2,4	Yes
13) Continued build out of Emergency Communications Systems.	Project Implementation	December 31, 2018	Goal #3,6	2,4	Yes
14) Assess and Improve IT Customer Support processes.	Project Implementation	December 31, 2018	Goal #3,6	2,4	Yes
15) Expand logging\analytics with dashboards and reports	Project Implementation	June 30, 2019	Goal #1,3,6	3	Yes

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 Web Developer (2) Administrative Assistant Data Warehouse Developer Director of IT Infrastructure Data Warehouse Administrator Director of Enterprise Applications Systems Support Analyst Director of IT Security Senior Network Engineer Associate Director of Enterprise Applications WAN Engineer IT Customer Support Operations Manager Network Engineer (3) Database Administrator II Senior Systems Administrator Database Administrator I Systems Administrator (3) ERP Analyst II (2) Systems Support Technician I (2) ERP Analyst I (5) Security Engineer
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

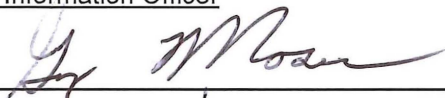| Budget (Unrestricted) Total	Notes (if any)
1000 (Academic Salaries)	
2000 (Classified Salaries)	$ 3,262,461
3000 (Employee Benefits)	$ 1,478,838
4000 (Supplies & Materials)	$ 18,150
5000 (Operating Expenses and Services)	$ 4,987,601
6000 (Capital Outlay)	$ 356,400
7000 (Other Outgo)	
Budget (Unrestricted) Total	$ 10,103,450
Budget (Contract/Community Ed) Total	

Section Seven: Projected Unit Resource Needs

a) **List the unit's needs above the current level.** [*if a Unit Goal in section five has a 'Yes' in the resources needed column, the need should be outlined here*] Describe the unit goal to which the request is related. Indicate the expected cost along with the rational. Rank the proposals in order of their importance to the unit (a rank of '1' would be the most important resource the unit needs in order to achieve its goals).

Resource Needs	Proposed Allocation, Need or Change	Related Unit Goal or AUO	Cost and Justification	Rank
Staffing	1. ERP Analyst 2. ERP Analyst 3. Data Warehouse Developer 4. System support Analyst 5. Functional Training Specialist	Goal 6	District FTE growth increased over the past 5 years by almost 20% Systems applications have increased by over 125% in the past 5 years Extensive Backlog for new applications, systems implementations, and upgrades are not being addressed. I.e. grants: 13 new in last 3 years. Research & Development of new technologies such as Guided Pathways, data warehouse, etc. while maintaining current operations, projects, etc. Increase of 3 Institutional Research offices at colleges has led to greater demand on Data Warehousing team staffed for 1 office. Contracts increase of 32% to support new applications, systems Baseline staffing levels are not on par with other districts including smaller single college districts.	
Technology	1. Software, consultants, and tools to implement district applications and systems to include Cloud, guided pathways, and several other district applications.	Goal 6	Provide Enhanced delivery and timeliness to support the colleges New technology applications and systems development Increase in SSSP technology requirements District growth with systems to support this.	
Equipment / Supplies				
Space / Facilities				
Professional Development				
Other: [describe]				
Total cost of resource needs over and above current budget allocation:			~ $ 600,000	

Submitter's Name: Gary Moser

Title: Chief Information Officer

Submitter's Signature: _____

Date Submitted: 12/17/18

Submitter's Immediate Supervisor: _____

Date of Review: _____

Chancellor's Signature: _____

Date of Review: 12-18-18

Date of Presentation to Administrative Council: October 29, 2018