STATE CENTER
COMMUNITY COLLEGE DISTRICT

Fresno City College | Reedley College | Clovis Community College
Madera Community College Center | Oakhurst Community College Center

DISTRICT SERVICES ADMINISTRATIVE UNIT REVIEW

Fiscal Year 2018-2019

Unit Name: Information Systems

Contact Manager: Scott Olds

Web Resources:

SCCCD District Strategic Plan 2017-2020 - https://www.scccd.edu/_uploaded-files/documents/about/strategic_plan_2017-2020.pdf

SCCCD Draft District wide Technology Plan 2019-2022 www.scccd.edu/draft-techplan

CONTENTS

1 ABOUT THE DISTRICT SERVICES ADMINISTRATIVE UNIT REVIEW

1.A Purpose

The District Services Administrative Unit Review is the annual review process for District Services units and is designed to serve these purposes:

- Document the unique strategies for improvement for each District Service unit
- Align strategies for improvement with the District vision, mission, values and goals as stated in the *SCCCD District Strategic Plan 2017-2020* and with other appropriate District-wide plans (i.e. District-wide Technology Plan)
- Collect and analyze data on District Services unit performance
- Provide an objective foundation for budget, staff, equipment, space, professional development, and other funding requests
- Demonstrate compliance with accreditation standards

This review process is designed to lead to continuous quality improvement and therefore includes the following cycle of data collection, analysis of strengths and weaknesses, development and implementation of strategies to remedy weaknesses, and re-evaluation. The steps are:

1. Describe the services provided by the District Service unit.
2. Use quantitative and qualitative data to analyze the services' strengths and weaknesses relative to meeting established standards, advancing the mission, vision, values and goals of the District and addressing other District-wide plans as appropriate.

3. Develop strategies to sustain or improve performance.
4. Implement the strategies.
5. Assess the impact of the strategies.

The final step of assessment is the starting point for the development of next year's District Services Administrative Unit Review. District Services Administrative Unit Review is linked to resource allocation. Requests for resources including staff, equipment, space, professional/organizational development and other needs.

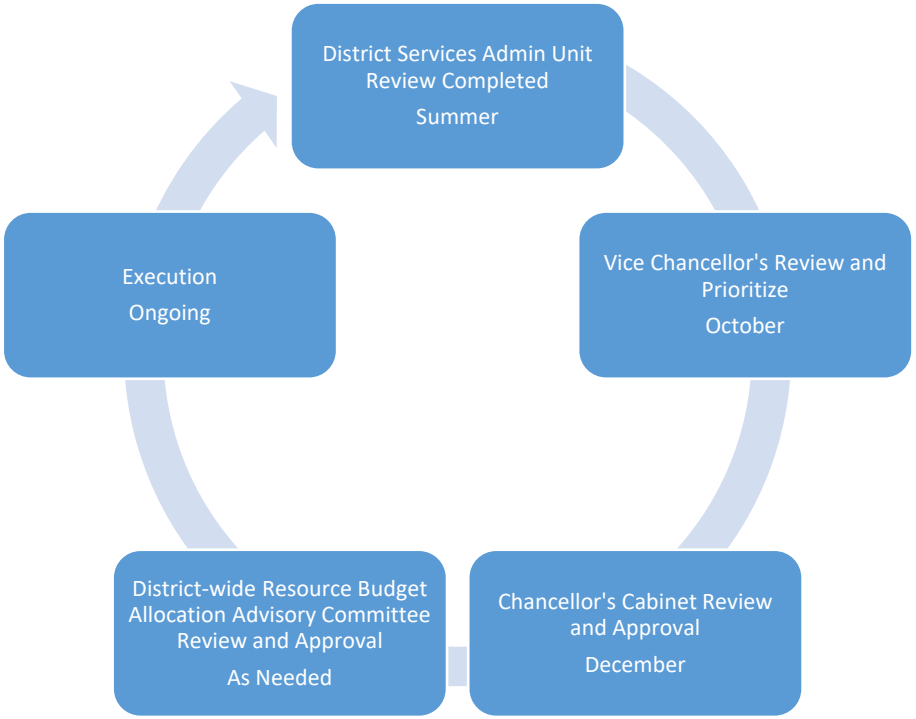
The units that complete an annual District Services Administrative Review are:

- Chancellor's Office Services
  - General Counsel
  - Foundation
  - Public & Legislative Relations
- Finance & Administration
- Human Resources
  - Personnel Commission
  - Professional Development
- Operations & Information Systems
  - Police, Environmental Health & Safety
  - Maintenance, Grounds, Transportation
  - Facilities Planning and Construction
  - Information Systems
- Educational Services & Institutional Effectiveness
  - Enrollment Management
  - Institutional Effectiveness & Planning

- Workforce Development
- International Programs

1.B Process

The graphic below depicts the process to be used is the annual unit review and improvement of the District Services Administrative units:



Each District Services Administrative unit completes the District Services Administrative Unit Review self-assessment and presents it to the Vice Chancellor's for discussion and prioritization. The resulting list of prioritized requests is forwarded to Chancellor's Cabinet for discussion and approval. Should any of the items be significant and require District-wide approval, those items are forwarded to the District-wide Resource Budget Allocation Advisory Committee for approval. Once approved the items are funded and implemented as described in the District Services Administrative Unit Review. The following year the District Services Administrative Unit Review documents the status of the previous year's strategies for improvement and sets the course for the next year's strategies.

1.C Mission, Vision, Values and Goals of the District

The District Services Administrative Unit Review identifies how the unit will meet the Mission, Vision, Values and Goals of the District. They are listed below for reference in completing the review.

Mission Statement

State Center Community College District (SCCCD) is committed to empowering our colleges in their efforts to promote exemplary educational opportunities and to provide safe, inclusive, and supportive learning environments leading to student success and global competitiveness which will transform our region.

Vision Statement

Empowering through Educational Excellence

Core Values

STEWARDSHIP

We are committed to the enhancement, preservation, conservation, and effective utilization of our resources.

COLLABORATION

We are committed to fostering a spirit of teamwork internally with our students, faculty, classified professionals and administrators while expanding our external partnerships with education, industry, and our community.

INTEGRITY

We are accountable, transparent and adhere to the highest professional standards.

INNOVATION

We are committed to an educational environment promoting actions and processes that create new methods, ideas, or products.

INCLUSIVITY

We are committed to and intentional in creating an environment that cultivates, embraces, and celebrates diversity.

Goals

EXCELLENCE IN EDUCATION

SCCCD is committed to empowering our colleges to cultivate excellence in educational programs and student support services.

INSTITUTIONAL EFFECTIVENESS

SCCCD is committed to data-informed but people-driven continuous quality improvement of processes and resources.

LEADER IN HIGHER EDUCATION AND COMMUNITY COLLABORATION

SCCCD is committed to being a force for positive change by expanding partnerships in education and workforce development.

The questions and forms on the subsequent pages are intended to assist you in completing a self-assessment for the administrative unit. The forms that follow are separated into pages for ease of distribution to relevant subcommittees. **Please keep the pages separated** if possible (though part of the same electronic file), **with the headers as they appear**, and be sure to include your unit identification on each page.

2 DISTRICT SERVICES ADMINISTRATIVE UNIT REVIEW SELF-ASSESSMENT

District Services Unit: Information Systems

Prepared by: Scott Olds

Date: 03/11/2019

2.A Description

2.A.01 What is the mission of the District Services Administrative unit?

It is the mission of the Information Systems Department to provide systems, services, solutions in an institutional ecosystem that advances goals towards instruction and knowledge, innovation and collaboration for the dedication to success of the district and college community.

2.A.02 Identify or outline how your unit serves the mission, vision, values and goals of State Center Community College District.

Please limit to a single paragraph.

While being committed to the improvements, perpetuation and efficient use of our resources, Information Systems provides three core areas of technical services. Application Systems Services develops and maintains the Enterprise Resource Planning (ERP) system, performs systems integration, and develops custom software. Infrastructure Services provides server, network, and storage systems that support the efforts of the Application System Services group as well as District Wide enterprise network and communications services. IT Support Services assists users with client-based technology; desktops, laptops and helpdesk. We are dedicated to an educational environment promoting activities and processes that create new methods, ideas, or products.

2.A.03 Identify or outline how your unit is meeting the goals/initiatives in unit specific plans.

Please attach the plan (i.e. District-wide Technology Plan, etc.). Please limit response to a couple of paragraphs as specifics are included in the form below.

Identifying new systems that make the institution better, leveraging statewide projects, evaluating the ERP implementing Ellucian self-service, security planning, Network and Systems uptime, migrate to the cloud whenever possible, Microsoft infrastructure modernization project, implementing SSO enabled systems /applications and accessible, responsive, modern web pages.

Information Systems initiatives are designed to anticipate technology trends in society and higher education and sets forth to leverage technology to meet the District mission, vision and goals while honoring the District core values. Please review the attached District-wide Technology plan and project list (appendix G and H) which highlight initiates the campuses and district work collaboratively together to accomplish.

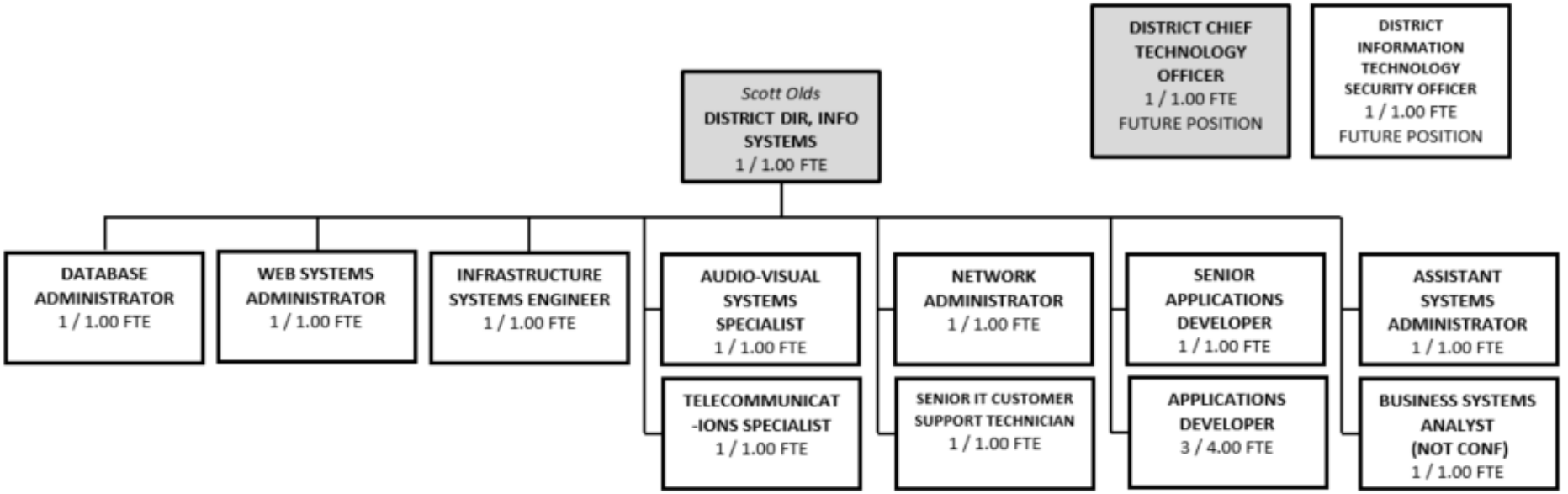
2.A.04 Function.

List no more than 10 bullet points to summarize the services provided by the unit.

- Software Development — ERP management, and custom software development
- Database Administration — ERP/SIS production databases, Data Warehousing, Reporting Services
- Cloud Services — Implement SaaS systems and applications and external database integrations
- Web Services — Development and Hosting of Public Websites and Web Portal
- Enterprise Networks — Internet Access, Firewall administration, WAN, Enterprise Network Design
- Server and Storage Services — Virtualization Platform, Storage Resources, and Backup Services
- Support Services — IT Helpdesk, support for applications, training
- Identity Services — Authentication and Identity Providers; Shibboleth, Active Directory, Ethos
- Communications — VoIP, e-mail, fax services, Emergency Notification systems, texting, Video Conferencing

2.A.05 Provide the official Organizational Chart of the unit which includes all levels of services and positions.

If necessary, provide very brief narrative descriptions by numbering the chart and including a numbered list with clarifications on a subsequent page.



Information Systems Services		
Title	**Description of Key Functions**	**# of employees**
District Director of Information Systems	Plans, organizes, directs and integrates operations of the centralized enterprise-wide technology systems and infrastructure that support instructional, student and administrative services. Directs and manages the performance of team leads and staff. Directs and oversees the selection of staff.	1
Application Systems Services		
Title	**Description of Key Functions**	**# of employees**
Senior Applications Developer	Application production support of the enterprise business systems, analyzes, designs, programs, test, implements, and documents and maintains assigned systems. Develop and maintain procedures and application solutions for multiple functional areas. Serves as project lead to implement solutions. Provides work direction and guidance.	1

Database Administrator	Designs, builds, administers and maintains the enterprise database environment. Provides technical design, development, documentation, maintenance and backup of databases and master files. Oversees a variety of application and support functions related the enterprise database systems. Manages the ETL process / integrations.	1
Web Systems Administrator	Design, development, implementation, maintenance and associated security and accessibility requirements for the district websites. Serves as lead developer, architect and administrator for web portals. Functions as lead for enterprise level web related projects.	1
Applications Developer	Application support of the enterprise business systems; analyze, designs, programs, tests, implements and maintains systems. Resolve application and database problems and other business and operations issues.	4
Business Systems Analyst	Serves as primary liaison between the campus community, business units, related third parties and the IT organization in to provide business process solutions to meet departmental and institutional needs	1

Infrastructure and Support Services		
Title	**Description of Key Functions**	**# of employees**
Infrastructure Systems Engineer	Technical architect, engineer, designer, and administrator for datacenter and enterprise-wide infrastructure operations including the design, deployment, and monitoring of infrastructure systems security, ensures the stability, integrity and efficiency of the systems infrastructure the supports enterprise-wide information technology environment. Administers the firewall, SAN, IP video, VoIP and IP emergency speaker systems. Physical and Virtual hardware resources. Works with consultants and contract vendors as required.	1
Network Administrator	Manages assigned Active Directory, cloud, authentication, image management, exchange e-mail, file, print and various application servers for the enterprise. Creates user and network accounts, permissions, distribution lists and security groups. Troubleshoots and resolves user access, application integration and other problems.	1
Assistant Systems Administrator	Installs, troubleshoots and monitors the enterprise identity provider (IdP) solutions, coordinates vendors, contractors and service providers supporting district applications including various SaaS hosted applications. Creates/deletes objects in Active Directory, maintains security, creates queries and utilizes tools to audit d modifications, deletions and additions. Queries SQL servers directly and cross-references the AD, Shibboleth and Distribution List processes. Troubleshoots and resolve issues or refers to appropriate technical staff for resolution.	1
Telecommunications Specialist	Plan, schedule, coordinates, operates and maintains telecommunications systems. Oversees the day-to-day administration, maintenance and support of a variety of voice communication systems, networks and equipment including VoIP, boxes, elevators, emergency broadcast systems, eFax and AV systems. Manages voice mail servers.	1
Senior IT Customer Support Technician	Provides technical support to staff, students and faculty by diagnosing, troubleshooting, repairing, installing and maintaining computers and related hardware, software and peripherals. Assists with hardware and software procurement, licensing compliance and asset management. Performs primary enterprise application support.	1
Audio-Visual Systems Specialist	Installs, upgrades, troubleshoots, repairs and schedules and provides user training on the audio-visual presentation system including video conferencing, and live broadcast education classes. Select, modify and create appropriate media and hardware for presentation systems. Provide technical support and setup for special events.	1

2.B Assessment

2.B.01 Assessment of prior year Strategies for Improvement.

(Not be be completed in the first year). Briefly describe the outcome for each goal and/or objective and attach data representing the outcome where possible.

N/A

2.B.02 Data.

Provide quantitative and qualitative data related to the District Service.

I. Technology Hardware Inventory Items	Type	Qty
Core Routers, Switches, etc.	Equipment	28
Access Points	Equipment	14
Voice Electronic Gateway	Equipment	4
VOIP Phones	Equipment	2,338
Emergency Phones (Speaker)	Equipment	20
Printers	Equipment	86
PC/Laptop	Equipment	273
Exchange Mailbox - Staff/Faculty	Account	7,104
O365 Mailboxes – Student	Account	840,000
Active Directory - Staff/Faculty	Account	4,602
Active Directory – Student	Account	717,650
WebAdvisor/Self-Service	Account	787,618

See Appendix A for details

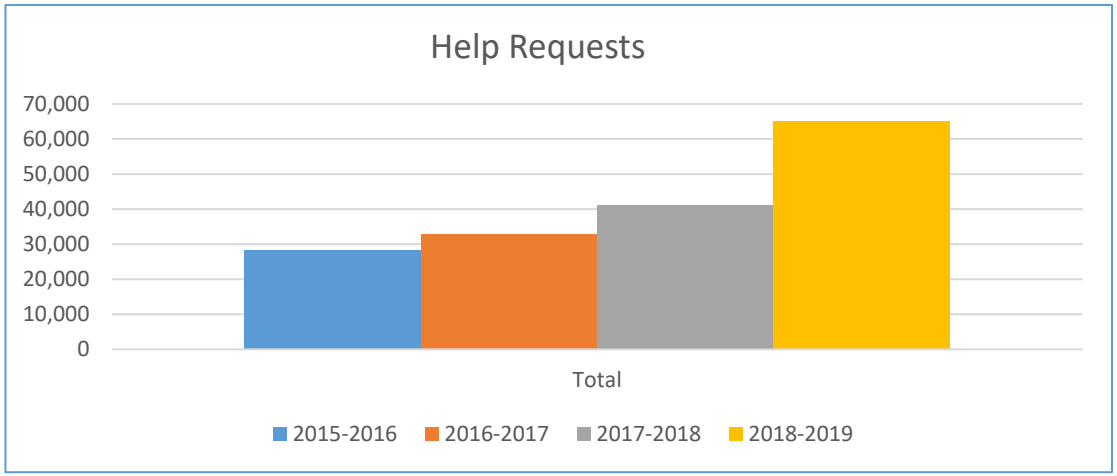
II.	Technology Software Inventory	Qty – 138 applications

III. Helpdesk

SCCCD IS Department logs helpdesk tickets with BMC's Track-it software. The count of interactions does not reflect planning sessions, DTAC and other committees/workgroups, project management, collaboration, telephone calls, assessing, troubleshooting, testing or other informal communications. Help requests have increased by 130 % from 2015 to 2019.

Helpdesk Tickets and requests for help

Helpdesk Tickets and requests for help			
Fiscal Year		Total	Percentage Growth
2015-2016		28,294	
2016-2017		32,921	16.00%
2017-2018		41,137	25.00%
2018-2019	Projected	65,128	59.00%
Cumulative		36,834	130.00%



IV. Up-time of systems and network

Information Systems schedules system, network and services maintenance on 10 Sundays a year. IS updates the maintenance calendar annually, considering

all departments' up-time needs throughout the fiscal year.

List of Potential Dates for IS Department System Maintenance

If a month has 5 weekends you must confirm with A&R and Payroll prior to scheduling downtime.

1st weekend of each month payroll is processing M2 payroll, Hors have been entered.

Avoid dates between the 20th and 5th of each month as payroll is processing

April and October are peak times for registration

Planned Maintenance can be scheduled on February; 2nd, 3rd and 4th Sunday – April; 3rd Sunday – September; 2nd, 3rd and 4th Sunday – November; 2nd, 3rd and 4th Sunday

V. Fiscal and Budget

FINANCIAL SUMMARY	2014-15		2015-16		2016-17		2017-18		2018-19	
TYPE	**BUDGET**	**EXPENSES**	**BUDGET**	**EXPENSES**	**BUDGET**	**EXPENSES**	**BUDGET**	**EXPENSES**	**BUDGET**	**EXPENSES**
Salaries, Wages, Benefits	$1,782,372	$1,680,525	$ 1,832,386	$1,664,128	$ 1,769,257	$ 1,707,872	$1,840,125	$ 1,813,509	$ 1,882,454	TBD
Supplies and Services	$13,000	$9,428	$13,000	$17,649	$13,000	$ 4,788	$18,000	$10,947	$18,000	TBD
Communications	$90,000	$47,810	$90,000	$43,686	$90,000	$36,944	$45,000	$38,607	$45,000	TBD
Equipment	$20,000	$ 143,530	$840,000	$828,128	$20,000	$45,970	$20,000	$30,328	$20,000	TBD
Software	$5,000	$795	$44,500	$ -	$ 5,000	$0	$10,000	$ 1,427	$10,000	TBD
Contract Services	$65,000	$76,689	$83,500	$63,804	$35,000	$52,302	$950,000	$153,114	$950,000	TBD
Conferences and Travel	$6,500	$3,938	$10,500	$19,110	$ 6,500	$ 9,404	$16,000	$ 6,333	$16,000	TBD
Software Licenses, Maint. & Support	$460,000	$ 531,667	$924,670	$742,972	$ 2,100,000	$ 1,782,097	$2,446,500	$ 1,860,682	$ 2,810,500	TBD
TOTALS	**$2,441,872**	**$2,494,381**	**$3,838,556**	**$3,379,477**	**$4,038,757**	**$3,639,376**	**$5,345,625**	**$3,914,946**	**$5,751,954**	**$TBD**

VI. Application Growth

In 2015-2016 IS supported 8 existing enterprise applications and added 10 additional applications in 2016-2017, an additional 16 in 2017-2018 and an additional 21 in 2018-2019

The application growth is 125 % from 15/16 to 16/17; 89% from 16/17 to 17/18; 61% from 17/18 to 18/19 and 276% cumulative growth from 2015 to 2019.

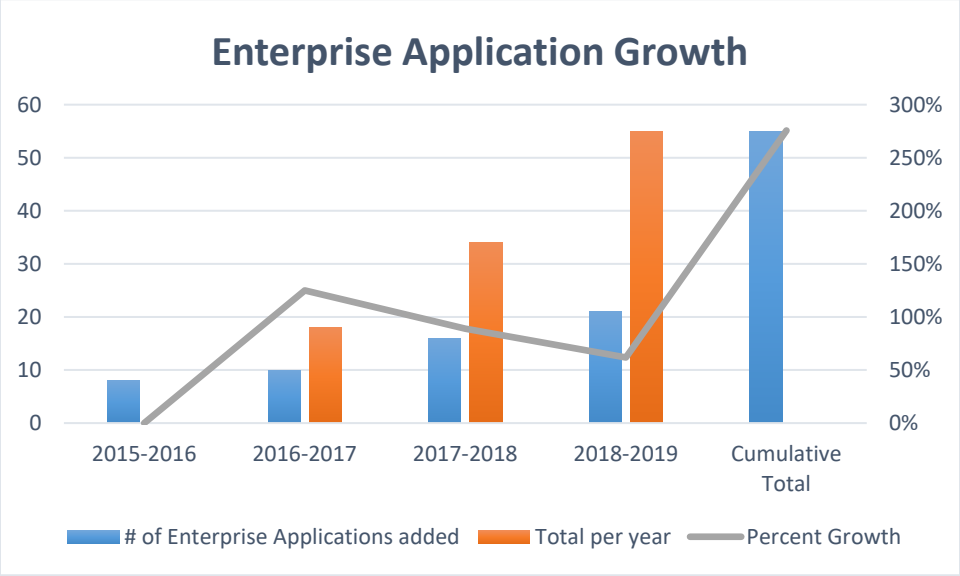
In 2015/2016 (BASELINE WAS 8 SYSTEMS: IS implemented and supported; Colleague; Blackboard, SQL, Easy Spooler, Visual Studio, Open CCC Apply, WebAdvisor, Kourier.

In 2016/2017 (10 NEW SYSTEMS ADDED) IS implemented and supported; Canvas, Course Exchange, Document Management, help desk tickets, NeoGov, OnBase, Tableau, Report Manager, time clock plus, TracDat

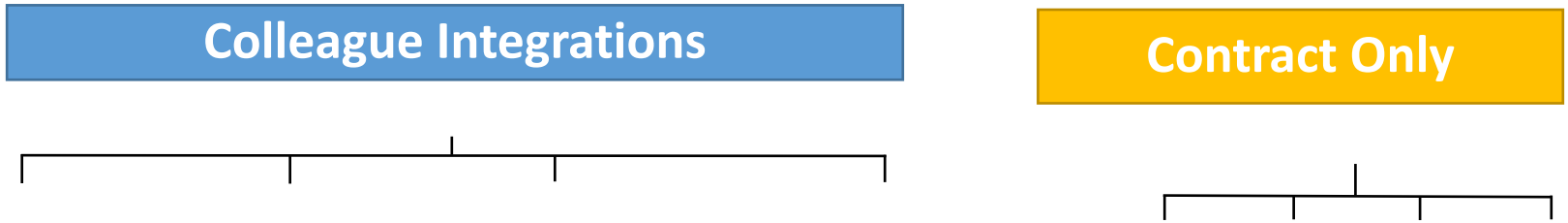
In 2017/2018 (16 NEW SYSTEMS ADDED): IS implemented and supported: BoardDocs, Business Forms, Ethos Identity, Hobsons Starfish, Intranet development, Milestone, Mobile by Ellucian, Project Glue, Qualtrics, Shibboleth, Security measures, Student FA self-service, TouchNet, Uniflow, web page development, VPN.

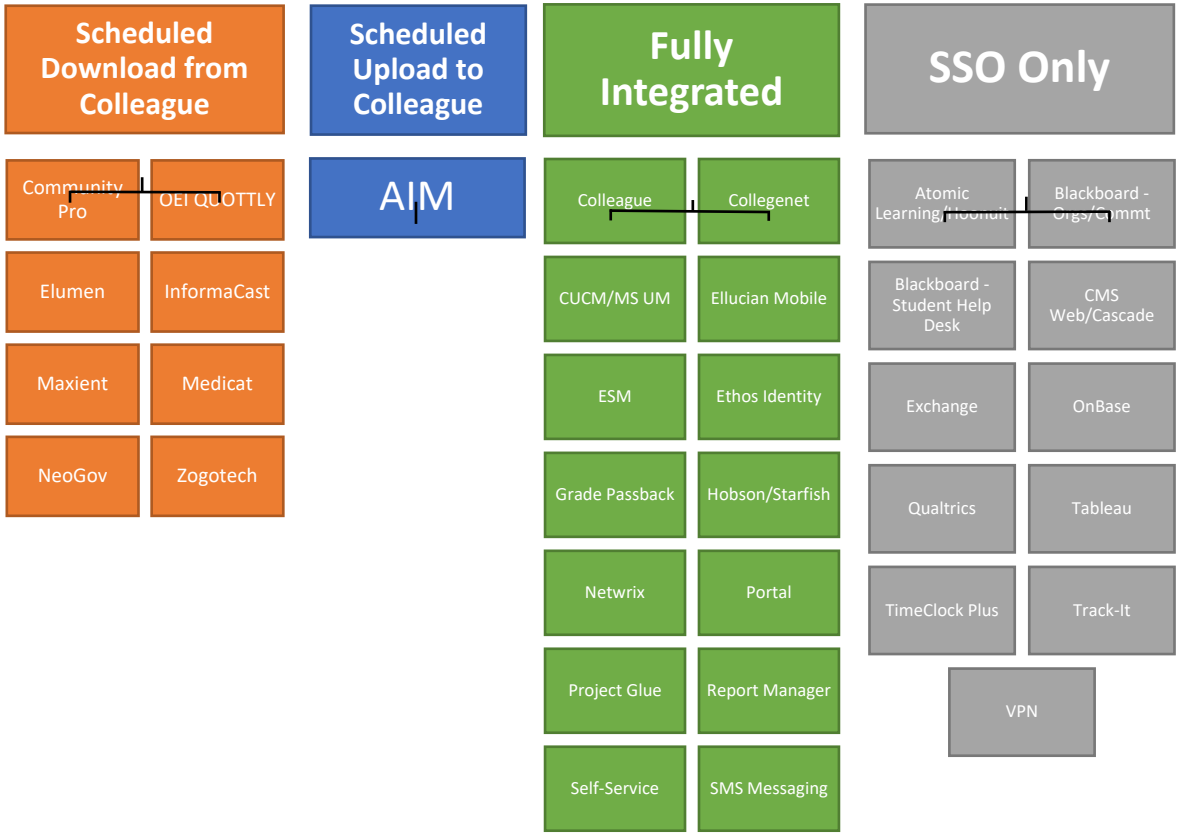
In 2018/2019 (21 NEW SYSTEMS ADDED): IS implemented and supported: AIM, Accessibility, Analytics, Data Warehouse, ESM, eLumen, Hobsons Starfish, Intranet development, JobSpeaker, Maxient, O365, Portal, Portal Guard, Security measures, AV expansion, self-service by Ellucian, student helpdesk, SSO, SharePoint, web page development, VPN four Reg2Go.

Fiscal Year	2015-2016	2016-2017	2017-2018	2018-2019	Cumulative Total
# of Enterprise Apps added	8	10	16	21	55
Total per year		**18**	**34**	**55**	
Percent Growth	*0%*	*125%*	*89%*	*62%*	*276%*


Enterprise Application Growth
60
50
40
30
20
10
0
300%
250%
200%
150%
100%
50%
0%
2015-2016
2016-2017
2017-2018
2018-2019
Cumulative Total
# of Enterprise Applications added
Total per year
Percent Growth

VII. Interface diagram




Scheduled Download from Colleague
Community Pro
OEI QUOTTLY
Elumen
InformaCast
Maxient
Medicat
NeoGov
Zogotech
Scheduled Upload to Colleague
AIM
Fully Integrated
Colleague
Collegenet
CUCM/MS UM
Ellucian Mobile
ESM
Ethos Identity
Grade Passback
Hobson/Starfish
Netwrix
Portal
Project Glue
Report Manager
Self-Service
SMS Messaging
SSO Only
Atomic Learning
Blackboard - Orgs/Commt
Blackboard - Student Help Desk
CMS Web/Cascade
Exchange
OnBase
Qualtrics
Tableau
TimeClock Plus
Track-It
VPN


Active Directory
Adobe
Board Docs
Canvas
CCCID_EPPN
Certifications
Cloud Hosting
Document & Web Accessibility
Domain REG - Educause
Domain REG - Go Daddy
External DNS
FUSD
General Dynamics
HP Data Spooler
Easy Spooler
IDERA Diagnostic Manager
IDERA Admin Toolset
Juniper JCARE
Kourier
Microsoft
Milestone
Monitoring - EWS
Nimble
Nursing
PluralSite
PortalGuard
Schooldude
Scopia
Site Improve
SmartSheet
Sophos
SSMSboost
Turnitin
Twillio
VEEAM
Verex
VisiPlex
VMWare
Web Pages
WinPAC
Credentials

VIII. Survey data

The IS Department track-it helpdesk system sends surveys to random customers as technicians complete helpdesk tickets.
The sample size is 10 %.

The results of the survey are as follows:

1. Was the technician professional? 83 % responded – professional and 7 % responded very unprofessional
2. Was the technician courteous? 87 % responded – very courteous and 5 % responded very unprofessional
3. Was the technician enthusiastic? 70 % responded – very enthusiastic and 4 % responded very unenthusiastic
4. Was your technician knowledgeable about the services/product? 89 % responded – very knowledgeable and 5 % responded not knowledgeable
5. Did the technician communicate effectively? 96 % responded – very effectively and 1 % responded not effectively
6. What topics would you like training on?
   21 ERP, 21 Word, 32 PowerPoint, 59 Outlook, 61 Excel, 69 Access, 20 Internet search

The customers are mostly satisfied with the IT Support Services. Where there is room for improvement, we will make every opportunity to meet the customers' expectations.

IX. PC and Laptop Hardware Replacement Plan – 5 years

The IS Department inventories all of the PC and laptops and produces a 5 year plan for hardware refreshments, replacements and updates. As each device's warranty expires, this assists IS with determining useful life. Below is the replacement plan for the next 5 years.

2019 – 76 computers need to be replaced

2020 – 30 computers need to be replaced

2021 – 47 computers need to be replaced

2022 – 22 computers need to be replaced

2023 – 13 computers need to be replaced

Options: The IS Department issues hardware standards and offers options for each type of device. A PC has an i5 or an i7 option and laptops have An i7, XPS or Microsoft Surface Pro option. These costs are approximately; PC - $1,750, $1,850 and Laptop - $2,250, $1,500.

Hardware standards are published as part of our Technology Master Plan.

X. Information Systems Project List

Information Systems tracks each project that is requested and agreed to in either the DTAC, IT Directors, IT project priority subcommittee or Vice Presidents group.

IS categorizes projects into three areas; Budgeted and in progress, on-hold or a future request. Every request is noted on the list and once projects are approved with a budget and agreed to, they receive a champion, a priority, a start date/ complete date, an IS lead and a resource team. Below is the summary of the categories:

In Progress – 40

On hold – 8

Future Projects- 23

XI. Technology Infrastructure Design Standards

District IS department is responsible for provisioning and operating a robust Information Technology Infrastructure. It is expected that the infrastructure will support the connectivity needs of voice, data, video, and multimedia communication, and capacity available for current and future applications such as Intelligent Building System (BMS), Security, Surveillance, Fire Alarm, etc. District IS owns the responsibility for the transport of all TCP/IP based traffic on the SCCCD campuses/sites, both internally and externally.

District IS staff, will actively participate in the design process. This includes attending architectural and engineering meetings that in any way will affect the provisioning of any and all information or communication systems during the course of the project.

2.B.03 Data Analysis.

Link the data presented above to established standards for the service, ACCJC standards for this service, the District Mission, Vision, Values and Goals.

Information Systems, professional support, facilities, hardware and software are appropriate and adequate to support the institutional functions, academic programs, teaching and learning, and support services. The institution continually plans for, updates and replaces technology to ensure its technological infrastructure, quality and capacity are adequate to support its mission, operations, programs and services. The institution assures that technology resources at all locations where it offers courses, programs and services are implemented and maintained to assure reliable access, safety and security. The institution provides appropriate instruction and support for faculty, staff, students and administrators in the effective use of technology and technology systems related to its programs, services and institutional operations.

Information Systems is committed to the enhancement, preservation, conservation, and effective utilization of our resources. We are committed to fostering a spirit of teamwork internally with our students, faculty, classified professionals and administrators while expanding our external partnerships with education, industry, and our community. We are accountable, transparent and adhere to the highest professional standards. We are committed to an educational environment promoting actions and processes that create new methods, ideas, or products. Information Systems is committed to empowering our colleges to cultivate excellence in educational programs and student support services and providing data-informed but people-driven continuous quality improvement of processes and resources. Information Systems is committed to be a force for positive change by expanding partnerships in education workforce development.

Information Systems helpdesk requests have grown by 130 % over the last 4 years and our enterprise software inventory has grown by 300 % in this time frame. The budgets have increased to support these initiatives, but the hardware budget, infrastructure and staffing provided has not kept pace with the explosion of growth in demand, need and desire to continually learn.

As displayed in the helpdesk survey and technology plan summit, our users are satisfied, but we are aware we can do much more to improve. This starts with adequate customer support staff. Adding technically trained staff will benefit the instructional for many years and provide the efficiency to do much more with less resources.

Information Systems is meeting recommendations of the strategic plan and the ACCJC standards, while following established district standards. The District received two recommendations from the recent accreditation visit.

The recent ACCJC issued recommendations that will need to be addressed in the follow-up report which directly relate to Technology usage across the District. One of which was # 3 Compliance; in order to meet the standard, the team recommends that the District implement and administrative program review process to inform the District planning efforts for Technology. The second recommendation was #4 Improvement, in order to improve institutional effectiveness, the team recommends that the district and colleges strengthen its planning to ensure reliable, safety and security of information.

2.B.04 Strategies for Improvement.

Identify strategies to be implemented in the next year to sustain or improve performance (do not include normal functions of your unit) in order from 1 – 5, with 1 as the most important. Before writing your strategies be sure to review other unit review documents and analysis provided in this self-assessment related to your unit.

Information Systems will meet ACCJC Standards and recommendations received at the last accreditation visit. We will:

- Develop and implement and administrative review
- Create a district-wide tech plan and this will create specific unit plan goals
- Ensure reliable access, safety and security of information

Strategies for Improvement	**Start Date**	**Status:** ongoing, completed, or date completion anticipated	**Resources needed to complete goal or objective** (reference applicable resource request page)	**Specific Unit Plan Goal(s)/Initiative(s) Addressed**	**District Goal(s) Addressed**
1. Adequate staffing and resources; Database Administrator, Chief Technology Officer, Security Officer,	09/2018	06/2019	Budget Space Planning Training Technology resources	*In current draft Tech Plan initiatives; 3.a.1 and 3.b.1:* (III.A.1) (III.A.9) (III.A.10) (III.C.1)	Excellence in Education

Applications Support Specialist, Business Analysts, others					
2. Cloud adoption – when appropriate	04/01/2018	ongoing	Budget New initiatives Consultation Engineering	*In current draft Tech Plan initiatives; 2.b.2:* (III.B.3) (III.C.2)	Leader in higher education and community collaboration
3. Accessibility; standards on web pages, forms and training Ellucian self-service development Portal development LMS Updates SLO and Curriculum development	07/2018	ongoing	Staffing Training Budget Data Governance Coordination/ communication Project Management Consultation DR and Cloud	*In current draft Tech Plan initiatives, 1.a.1, 1.b.1, 2.a.3, 2.b.2, 3.b.1, 8.a.2, 8.b.2: (II.A.2) (IV.A.4) (II.B.1) (II.C.1) (III.C.1) (IV.A.1) (III.B.3) (III.C.2) (III.D.1)* (III.B.4) (II.C.8) (III.A.15) (III.C.3)	Institutional Effectiveness Leader in higher education and community collaboration
4.Microsoft Infrastructure Upgrade Project Exchange Update O365 Adoption Begin e-mail migration SharePoint Online for committees and organizations	06/01/2019	08/2019	Staff Budget Hardware/software Training Maintenance scheduling and risk to up-time	*In current draft Tech Plan initiatives, 8.a.1, 8.a.2, 8.b.1, 8.b.2, 8.c.1:* (III.C.1) (I.A.2) (111.C.2)	Excellence in Education Institutional Effectiveness Leader in higher education and community collaboration

5. Secure Data and Systems Emergency Preparedness	01/2018	ongoing	Budget Policies and Procedures Education of staff Project Management Upgrades DR and Cloud	*In current draft Tech Plan initiatives; 5.a.1, 5.a.2, 5.a.4, 10.a.1, 10.a.2, 10.a.3:* (III.C.3) (III.C.3) (III.C.3) (III.C.3) (III.C.3)	Excellence in Education and Institutional Effectiveness and Leader in higher education and community collaboration
6. Effective Policies, Procedures, Standards and Guidelines	06/2018	Fall of 2019	Budget Testing Development Education / Training Acknowledgment Portal Governance	*In current draft Tech Plan initiatives; 4.a.1, 4.q.2, 4.a.3: (III.C.5) (IV.A.2) (III.C.5) (IV.A.2) (IV.A.6)*	Excellence in Education Institutional Effectiveness Leader in higher education and community collaboration
7.Review and strengthen IT governance structure to maintain focus on enterprise- wide decisions; identify improvements; document and create District wide understanding of IT decision	05/2019	On-going	Education / Training Acknowledgment Portal Governance SharePoint	*In current draft Tech Plan initiatives*; 6.a.1, 6.a.2, 6.a.3: (I.B.7) (IV.A.1) (IV.A.6) (III.C.4) (IV.A.1) (IV.A.6) (IV.D.6) (III.C.2)(IV.A.1) (IV.A.6) (IV.D.6)	Excellence in Education Institutional Effectiveness Leader in higher education and community collaboration

making and governance processes; annually evaluate governance effectiveness and improve as needed					

2.B.05 Staffing Profile.

Please indicate the number in terms of FTE. A full-time staff person is a 1, and a half time person is a .5.

Positions	Staffing Levels for Each of the Previous Five Years						Anticipated total staff needed	
	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018		Current Year 2018-19	Next Year 2019-20
Academic Management								
Classified Management	1	1	1	1	1		2	2
Classified Staff FT	12	13	13	13	13		16	22
Classified Staff PT								
Confidential Staff FT								
Faculty Reassigned FTE Full time								
Faculty Reassigned FTE Part time								
Temporary Staff/Student Workers				.4	.4		.4	.8
Total Full Time Equivalent Staff	13	14	14	14.4	14.4		18.4	24.8

- *Three Mid-year staffing position were approved: Chief Technology Officer, Security Officer, and a Database Administrator.*

Complete the Management and/or Staff request form that follows if new employees are needed.

*When filling out the form on the <u>next</u> page please **consider** the following in framing your "reason:"*

a. *Has the workload of your unit increased in recent years?*

b. *Has technology made it possible to do more work with the same staff? Or, has technology increased your work load (adding web features which need updating for example)?*

c. *Does the workload have significant peaks and valleys during the fiscal year that would be best filled by part time staff?*

2.C Resource Requests

Identify additional staff, equipment, space, professional or organizational development or other needs required to implement the Strategies for Improvement in the following forms. If the unit has no additional needs in a particular area, please indicate with N/A.

2.C.01 Staff Needs

NEW OR REPLACEMENT STAFF (Administrator, Faculty or Classified)

List Staff Positions Needed for Academic Year 9 Place titles on list in order (rank) or importance.	**Annual Cost including Salary & Benefits**	**Unit Strategies for Improvement to Be Met**

1. IT Application Specialists (Qty-2) Justification: The IS department is unable to provide support, training or expansion for application and software needs of various departments. The departments need support for all of the new software and systems investments and IS is not staffed to manage new requests for future requests. SCCCD made a strategic and fiscal decision to centralize these applications and our users are in need to learn and grow in order to achieve the district's strategic plans, fulfill their mission and deliver on the promises of its vision and values. The district enterprise applications have grown by 300 % in 3 years. (refer to section 7 – application growth) Describe how this meets District Goals of: Excellence in Education - This position will cultivate excellence in student support services, while helping the commitment to data driven, continuous quality improvement of processes and resources. Not only will SCCCD maintain the high-level education provided, but IS will be a force for positive change for the entire district. Support and training challenges can be minimized. Institutional Effectiveness – The institution provides appropriate instruction and support for faculty, staff, students and administrators, in the effective use of technology and technology related systems to its program, services and institutional operations. Leader in Higher Education & Community Collaboration - The following is a list of new applications, or requests, that IS must support and maintain; advancing technology and provide sustainability. AIM, Accessibility, Analytics, BoardDocs, Business Forms, Canvas, CollegeNet, Data Warehouse, Document Management, ESM, elumen, Hobsons Starfish, Intranet development, JobSpeaker, Maxient, Neogov, Onbase, O365, Portal, Report Manager, Security measures, AV expansion, self-service by Ellucian, Tableau, time clock plus, help desk tickets, SharePoint, Uniflow, web page development, VPN. If applicable describe how this meets appropriate unit plan (i.e. District-wide Technology Plan): Recent Accreditation Standards - 1. Technology services, professional support, facilities, hardware, and software are appropriate and adequate to support the institution's management and operational functions, academic programs, teaching and learning, and support services. 4. The institution provides appropriate instruction and support for faculty, staff, students, and administrators, in the effective use of technology and technology systems related to its programs, services, and institutional operations.		*In current draft Tech Plan initiatives; 1.a.1, 1.b.1, 2.a.1, 3.b.1,4.a.1, 4.a.2, 4.a.3, 5.a.2, 5.a.3, 6.a.2, 6.a.3, 6.b.1, 6.b.2, 7.a.1, 7.a.2,7.a.3, 7.b.1, 7.c.1, 8.a.2, 8.b.1, 8.b.2, 9.a.1 :* (II.A.2) (IV.A.4) (II.B.1) (II.C.1) (III.C.2) (III.B.4) (III.C.2) (IV.A.1) (III.C.1) (III.C.2) (III.D.1) (III.C.5) (IV.A.2) (III.C.4) (IV.A.6) (III.C.4) (IV.A.6) (IV.D.6) (IV.A.1) (IV.D.2) IV.D.2) (III.A.14) (I.B.8) (III.A.1) (III.A.9) (III.A.10) (III.C.1) (III.C.3) (III.A.15) (II.C.8) (III.B.4)
2. District IT Security Officer (QTY – 1) Justification: To provide proper provisioning of users, groups, policy, rights or security settings for application and software, design and implementation of secure enterprise network infrastructure, secure		*In current draft Tech Plan initiatives; 2,b.1, 2.b.2, 3.a.1, 3.b.1,*

network devices needs of various departments. To provide updated policy, procedures, data governance, and rights issued within the applications. Kern CCD has 2 security specialists on staff and North Orange has 2 security specialists. IS received funding as of 03/22/19 Describe how this meets District Goals of: Excellence in Education - The institution assures that technology resources at all locations where it offers courses, programs and services are implemented and maintained to assure reliable access safety and security. Institutional Effectiveness –. The institution has policies and procedures that guide the appropriate use of technology in the teaching and learning process Leader in Higher Education & Community Collaboration – Improved understanding of the times we live and work in. SCCCD has constant threats; phishing, malware, Bring Your Own Device (BYOD) with no protection, personal home computer use; with no protection, SQL script injections, ransomware, sextortion, internal staff access, no roles based permissions, the need for data governance, updated and enforceable policies and procedures, coordinate penetration testing, to cull 800,000 live ex-student accounts who connect to us, remote access, write a security plan and response plans and more on-going issues. If applicable describe how this meets appropriate unit plan (i.e. District-wide Technology Plan): Ensure safety and security of all students, staff and visitors. Ensure integrity/security of electronic systems and confidential data.		*4.a.1, 4.a.2, 4.a.3, 5.a.1, 5.a.2, 5.a.4, :* (III.A.1) (III.A.9) (III.A.10) (III.C.1) (III.C.3) (III.B.4) (IIIA.15) (II.C.8)
3. SharePoint Online Administrator (QTY – 2) Justification: The IS department is preparing to launch SharePoint Online (SPO) for the migration of organizations and committees from blackboard. IS and IT Leadership will also consider other business use cases in the near future. No one is trained. To support new SPO software, maintain the licenses, provision users, maintain the application and documents, provide documentation, apply security settings. San Jose CCD, Riverside and College of the Desert all have SPO Administrators Describe how this meets District Goals of: -Excellence in Education - SCCCD should follow the consultation plan the Entisys provided. -Leader in Higher Education & Community Collaboration – SharePoint will provide the institution with a migration of its committees and organizations as well as provide a much-needed collaboration platform. We need expertise to manage this explosion in growth, usage and business use cases for expansion. If applicable describe how this meets appropriate unit plan (i.e. District-wide Technology Plan): ACCJC Standards:		*In current draft Tech Plan initiatives:* (III.C.1) (III.C.2) (III.C.3) (III.C.4) (III.C.5)

C. Technology Resources 1. Technology services, professional support, facilities, hardware, and software are appropriate and adequate to support the institution's management and operational functions, academic programs, teaching and learning, and support services. 2. The institution continuously plans for, updates and replaces technology to ensure its technological infrastructure, quality and capacity are adequate to support its mission, operations, programs, and services. 3. The institution assures that technology resources at all locations where it offers courses, programs, and services are implemented and maintained to assure reliable access, safety, and security. 4. The institution provides appropriate instruction and support for faculty, staff, students, and administrators, in the effective use of technology and technology systems related to its programs, services, and institutional operations. 5. The institution has policies and procedures that guide the appropriate use of technology in the teaching and learning processes.		
4 Business Analysts (QTY – 4) Justification: The IS department is unable to provide analysis for applications, software or business needs of various departments or divisions. The IS department is not providing anything listed under General Purpose or Essential Duties & Responsibilities for any enterprise software and systems SCCCD has invested in, or plans to invest in. Citing Computer Economics; the standard industry metric is between 600 users/staff to 1 Business Analyst. 7.6 % to 9 % of IT staff should be a Business Analyst. According to IT World Canada; the correct metrics are 1 Business Analyst per 2 developers. SCCCD has 8 developers. Describe how this meets District Goals of: -Excellence in Education - This position will cultivate excellence in student support services, while helping the commitment to data driven, continuous quality improvement of processes and resources. Not only will SCCCD maintain the high-level education provided, but IS will be a force for positive change for the entire district. -Institutional Effectiveness – We are under serving our customers. There is a gap in the services provided, for the main reason, we are not providing any of the business analysts services in 2018. As we grow and add more computers, staff, students, applications, systems, and we redefine business processes, we need additional support staff. -Leader in Higher Education & Community Collaboration – SharePoint will provide the institution with a migration of its committees and organizations as well as provide a much-needed collaboration platform. We need expertise to manage this explosion in growth, usage and business use cases for expansion.		*In current draft Tech Plan initiatives; 1.a.1, 1.b.1, 2.a.1, 3.b.1,4.a.1, 4.a.2, 4.a.3, 5.a.2, 5.a.3, 6.a.2, 6.a.3, 6.b.1, 6.b.2, 7.a.1, 7.a.2,7.a.3, 7.b.1, 7.c.1, 8.a.2, 8.b.1, 8.b.2, 9.a.1 :* (II.A.2) (IV.A.4) (II.B.1) (II.C.1) (III.C.2) (III.B.4) (III.C.2) (IV.A.1) (III.C.1) (III.C.2) (III.D.1) (III.C.5) (IV.A.2) (III.C.4) (IV.A.6) (III.C.4) (IV.A.6) (IV.D.6) (IV.A.1) (IV.D.2) IV.D.2) (III.A.14) (I.B.8) (III.A.1) (III.A.9) (III.A.10)

<u>If applicable describe how this meets appropriate unit plan (i.e. District-wide Technology Plan):</u> Business analysts, whose primary job function brings them directly into user business functions to gather user requirements, define or design business processes using information systems. Customer (user) relationship personnel, who serve as a liaison between users and IT, represent the user community to the IT group, and ensure that IT systems are effectively utilized by the organization. These IT personnel are often the contact point when systems and services are outsourced to a third-party developer. Recent Accreditation Resources: C. Technology Resources 1. Technology services, professional support, facilities, hardware, and software are appropriate and adequate to support the institution's management and operational functions, academic programs, teaching and learning, and support services. 2. The institution continuously plans for, updates and replaces technology to ensure its technological infrastructure, quality and capacity are adequate to support its mission, operations, programs, and services. 3. The institution assures that technology resources at all locations where it offers courses, programs, and services are implemented and maintained to assure reliable access, safety, and security. 4. The institution provides appropriate instruction and support for faculty, staff, students, and administrators, in the effective use of technology and technology systems related to its programs, services, and institutional operations. 5. The institution has policies and procedures that guide the appropriate use of technology in the teaching and learning processes.		(III.C.1) (III.C.3) (III.A.15) (II.C.8) (III.B.4)
5. Executive Assistant (QTY- 1) <u>Justification -</u> The IS Department doesn't have any clerical support. The IS Director performs these duties or relies on the helpdesk technician. The end result is this removes our focus from more important duties. IS programs and day to day activities have a significant clerical burden. The district-wide average pf clerical support is 1.5 per Director or Dean. FCC Technology Services has two full time clerical assistants. Comparable California Community Districts in the State of California have an office assistant or some form of clerical help in their IT Departments. <u>Describe how this meets District strategic plan, mission and values:</u> SCCCD's mission statement includes having supportive learning environments. This position will cultivate excellence in student support services, while helping the commitment to data driven, continuous quality		

improvement of processes and resources. Not only will SCCCD maintain the high-level education provided, but IS will be a force for positive change for the entire district. Being organized will help this department deliver excellent customer support and relations. This lines up with California Community College Accreditation Standards: Part III, C: "Technology resources are used to support student learning programs and services and to improve institutional effectiveness." Clerical support allows our IS technicians, programmers and analysts to focus on their jobs that directly impact supporting student learning programs and services. - Student aide supervision - Requisition creation/tracking - Answering department phones/emails - Work order sorting - Blanket Purchase Order tracking - Department budget tracking - Budget/Expenditure Transfers - Copying/Scanning department documents - Inventory monitoring - Basically, all non-IS functions of the IS Dept.		
6. Chief Information Systems Technology Officer (QTY – 1) Justification: Through the Districtwide Technology plan and evaluation process, there is a recommendation to hire a Chief Information Systems Technology Officer (CISO or CTO) for the district. Also, the recent classification study has a recommended CTO position specification. In reviewing similar sized multi-college districts, 11 CCCD's were studied: Coast, Contra Costa, Foothill, Kern, Los Rios, Peralta, Riverside, San Diego, San Mateo, South Orange and Ventura. Of the 11 studied, 4 have a CIO or CTO. A chief IS or chief TO must be assigned to the district. This position shows to have multiple directors/managers that report to the position. At SCCCD, we are lacking in management technology staff at the district office level to ensure systems, technology applications and security is addressed in a cohesive manner districtwide. Describe how this meets District Goals of: -Excellence in Education – The District's mission states, "State Center Community College District (SCCCD) is committed to empowering our colleges in their efforts to promote exemplary educational opportunities and to provide safe, inclusive and supportive learning environments leading to student success and global competitiveness which will transform our region." According to California Community college Accreditation Standards, we should ensure "commitments to a higher education," which cannot be		*In the current draft Tech Plan Initiative #3.a.1*

achieved without providing quality technology services and systems to support technology that meets the needs of the staff and students safe learning environment. -Institutional Effectiveness –. In the most recent accreditation review process, there were two accreditation recommendations related to information systems/ technology: --District Recommendation #3 (Compliance): In order to meet the Standard, the team recommends that the District implement administrative program review process to inform District planning efforts for technology and complete its District technology plan (III.C.2) District Recommendation #4 (compliance): In order to meet the Standard, the team recommends that the District and Colleges strengthen its planning to ensure reliable access, safety and security of information. (III.C.3) A Chief Information Systems Technology Officer would ensure Accreditation standard III.C is adhered to and the district is successfully providing the support and technological needs of the students and staff throughout the district through a visionary process that the campuses and Do would benefit from. Leader in Higher Education & Community Collaboration – SCCCD is growing with the passage of Measure C. As we build new campuses and expand our existing campuses, the need for expanded technology services is growing, while at the same time the reliance upon technology and expectations of technology is growing. The IS/IT departments must catch up and they need a leader that can bring them to a supportive and visionary process, that than a reactive process.		

2.C.02 Equipment (including technology) Needs Not Covered by Current Budget

List Equipment or Equipment Repair & Technology Needed for Academic Year. Please be as specific and as brief as possible. Place items on list in order (rank) or importance.	**Annual TCO*** **				
	Initial Cost - **(A)**	Annual Cost (i.e. licensing) – **(B)**	Life Cycle (Years) – **(C)**	TCO (per year cost) - $D = B + A/C*2$	Unit Strategies for Improvement to be Met
1. AV upgrades and replacement Justification: The current AV system hardware and software platform has reached end of life and need a complete replacement. There are many issues logged with our current system and this area must be improved. Life Span – 7 years. $110,000 one-time cost and $28,000 on-going maintenance and support cost per year	**$110,000**	**$28,000**	**7**	**$59,428 per year**	
2. Class and room utilization solution Justification: Institution needs a solution to schedule and manage its public spaces, classroom learning spaces and web-based technology for outreach and access. We need a SaaS solution	**$230,000**	**$45,000**	**10**	**$91,000 per year**	
3. Migration to cloud Justification:	**$50,000**	**$40,000**	**5 years**	**$60,000 per year**	
4. Microsoft Infrastructure Consultant Justification: Institution needed to perform significant upgrades and migrations to modern MS architecture solutions, including migration of some services to cloud Life Expectancy - 7 years	**$760,000**	**$10,000**	**7 years**	**$227,142 per year**	
Districtwide Technology plan consultant- Institution needed a District Wide technology plan	**$300,000**	**$200**	**4 years**	**$160,000 per year**	
6. Disaster recovery	**$1,000,000**	**$65,000**	**10 years**	**$265,000 per year**	

Justification: Disaster recovery, business continuity – security phase 1. California has experienced various types of natural and unplanned disasters. Ransomware is also on the rise. We need to expect this kind of activity to continue perpetually.					

** Annual TCO = "Total Cost of Ownership" is equal to the initial cost divided by its lifespan, multiplied by two (assuming the replacement cost will double over its life), plus the annual cost to maintain it annually.

2.C.03 Space Needs.

Not Covered by Current Building or Remodeling Projects

List Space Needs for Academic Year: *N/A* **(Office space, storage, etc.,)** Place items on list in order (rank) or importance.	**Initial Cost ($)** **A**	**Lifespan (Years)** **B**	**Ongoing Annual Costs ($)** **C**	**Annual TCO**** **D = C + A/B*2**
1. District Data Center Expansion Justification: *Expand server room to address future expanding IS systems at the main DO-Weldon Data Center (recommended to be expanded into the current VC, Ops & IS office). Data Center is future home to PD network equipment and servers and is also the private cloud for the colleges and DO.*	$100,000	20	$10,000	$20,000
2. Disaster Recovery Improvements Justification: *Further develop business continuity and disaster recovery infrastructure. Real-time replication to remote datacenters and utilization of cloud services for rapid restoration of services in the event of an emergency.*	$450,000	20	$20,000	$42,500
3. AWS off-site storage and backup Justification: *Improve data security and retention durations via further utilization of AWS storage and archival services.*	$35,000	20	$14,000	$17,500

** Annual TCO = "Total Cost of Ownership" is equal to the initial cost divided by its lifespan, multiplied by two (assuming the replacement cost will double over its life), plus the annual cost to maintain it annually.

2.C.04 Professional or Organizational Development Needs

List Professional Development Needs. Reasons might include in response to assessment findings or the need to update skills to comply with state, federal, professional organization requirements or the need to update skills/competencies. Please be as specific and as brief as possible. Some items may not have a direct cost but reflect the need to spend current staff time differently. Identify if one-time or an annual/ongoing need. Place items on list in order (rank) or importance.	**Annual TCO****		
	Cost per item	Number Requested	Total Cost of Ownership
1. TRAVEL & CONFERENCE FOR IS STAFF Justification: In-person networking fosters relationships outside of software vendors and allows the institutions to work together to overcome common challenges and share best-practices 3-year training plan for all IS staff Examples: O365, AD, PowerShell, SharePoint Admin, Cisco call manager, training; Ellucian, CISOA, CENIC conferences	**$56,000**	**Entire dept.**	**$56,000 on-going**
2. Professional Development Justification: Spend 8 hours per month (per IS staff member) of professional development, i.e. self-study, atomic learning, Hoonuit, Pluralsite, Linda, webinars, etc. to ensure staff continue to be competent in their profession and up to date on technology improvements	**$86,400 per year**	**12 workdays/yr = 1440 hours per year**	**Internal cost, requires additional staff - $86,000 per year**
7. Cross Training Justification: 8 hours per month so IS can maintain effective service levels even when not fully staffed due to retirements, leaves, etc.	**$86,400 per year**	**1440 hours**	**Internal cost - $86,000 per year**
8. Leadership training Justification: Effective leadership produces a well-managed and motivated team. PMP, leadership development, HR sponsored training.	**$6,000**	**1**	**$6,000 Ongoing**

** Annual TCO = "Total Cost of Ownership" for one year is the cost of the item for one year.

2.C.05 Other Needs

List Other Needs that you are certain do not fit elsewhere. Please be as specific and as brief as possible. Not all needs will have a cost but may require a reallocation of current staff time. Place items on list in order (rank) or importance.			**Annual TCO****	
	Initial cost (A)	Lifespan (C)	Annual Cost (B)	Total Cost of Ownership D= B + A/C*2
1. **Technology Consultant** Justification: The district needs technology consultants to evaluate AV system and platform, remove old students AD and O365 accounts, reorganize Active Directory based on GPO and group membership and fix the security and rights issues. SCCCD AD needs to be reorganized, using GPO and Groups at all times, consistency between the colleges and district, security audit, integration with account creation with colleague, address the network rights and expand the use of Netwrix for file systems and folders. We must address policy and be assured of technicians not making mistakes. Lifespan – 10 years. $200,000 one-time and $15,000 on-going per year	**$200,000**	**10 years**	**$15,000 per year**	**$55,000 per year**
2. Self-Service Justification: Need to transition away from old WebAdvisor technology to new Self-Service technology. Ellucian support for WebAdvisor ending 2021. WebAdvisor isn't popular with students or employees and inhibits the learning environment and institutional effectiveness. It will not be supported by Ellucian and we can't make any customization to it any longer. Lifespan – 10 years	**$210,000**	**10 years**	**$11,000 per year**	**$53,000 per year**
3. Portal continued development	**$90,000**	**5 years**	**$90,000 per year**	**$90,000 per year**

Justification: Develop MyPortal features based on outreach and survey results of students, administrators. On-going development of communications preferences. Any student, new or returning, has a long "To Do List" prior to beginning the school year. Students need to select courses, get familiar with the institution grounds, find out where classes take place, common meeting areas, living facilities, the library, bookstore, department offices and much more. And this is only the "school" part. There's an entire social aspect to adjust to as well. One of the biggest obstacles that a student portal removes is the number of information silos found across the colleges today. Think about all the systems that store information on our colleges and district: • Student Information Systems, ERPs, CRMs • Learning Management System • Facilities • Courses, Departments, Professors profiles • Notifications for school closures, class changes, etc. • Bookstore e-commerce systems It's impossible to keep track of everything individually. A modern Student Portal can provide centralized, secure access to student and facility information by connecting to these systems and pulling key information into the portal. Lifespan 5 years. $90,000 per year on-going per year				
4. CRM Justification: District needs a customer relational management system for marketing, outreach and business contacts.	**$200,000 One-time**	**10 years**	**$45,000 per year**	**$85,000 per year**

More and more higher education institutions are now adopting Customer Relationship Management systems to attract, engage and communicate better with their students at the different points of the student lifecycle. Quite often, choosing one college over another with similar credentials depends upon the way in which the institution communicates with the prospect. Is the admissions team supporting students during the application process? Is the college presenting students with relevant information? Will the course cater for the student's career aspirations? These days, most students want regular, relevant and insightful communications; college staff want a streamlined way of reaching out to students without the burden of extra administration. A CRM provides valuable insights about your students, allowing you to nurture stronger and more personal relationships with prospective and current students but also with alumni. Also, in an age of flexible and remote working, it's good to know that the platform can be accessed on smartphones and tablets. Lifespan – 10 years. $200,000 one time and $45,000 ongoing per year				
5. Accessibility of all document and forms Justification: 508 CA regulation. All forms and documents posted on any form of web page, must be accessible. Institutions have begun taking accessibility more seriously as the threat of litigation has grown, enforcement has grown more stringent and challenges for students have garnered more mainstream discussion. Learning management systems like Blackboard and Canvas are among the companies offering products and services billed as early-warning systems and even antidotes to accessibility shortcomings. Institutions are striving in greater numbers toward universal design for learning, which emphasizes multifaceted tech-driven approaches to improving students' access to learning.	**$200,000**	**10 years**	**$20,000 per year**	**$60,000 per year**

Lifespan 10 years. $200,000 one-time and $20,000 on-going per year				
6. Business Continuity/Disaster Recovery Plan Justification: Develop a comprehensive Business Continuity / Disaster Recovery Plan A collection of resources, actions, procedures, and information that is developed, tested, and held in readiness for use in the event of a disaster or major disruption of operations. The objective of the Business Continuity Plan is to establish policies, procedures, and coordinate recovery of critical college functions. This plan will increase the district's ability to respond to and recover from emergencies that may threaten the health and safety of the college or inhibit the district's ability to continue its operations. A comprehensive business continuity plan will help you maintain your central business activities while limiting the economic impact and allowing you to return to normal operations as quickly as possible. Each division and/or department responsible for performing one or more critical functions will develop a departmental business continuity plan and establish a structure to administer, update, and implement the plan. The intent is to minimize the amount of disruption any future emergency may cause to the department's critical functions. Lifespan – 7 years. $125,000 one-time and $25,000 on-going per year	**$125,000**	**7 years**	**$25,000 per year**	**$60,700 per year**
7. Annual increases to existing district wide software maintenance Justification: Increase in LTO off-the-top annual budget – 11.6 % annual growth due to adding software and escalation of existing agreements.	**$238,000**	**annual**	**11 % per year**	**$238,000 (11 % per year of the LTO budget)**
8. On Base Scanners Justification: The current scanners have reach end of life and need a complete replacement. Life Span – 3 years. $24,000 one-time cost and $1,000 on-going cost per year	**$24,000**	**3 years**	**$1,000 per year**	**$17,000 per year**
9. Informacast upgrade Justification: The current emergency system software platform is in need of an upgrade. Life Span – 7 years. $95,000 one-time cost and $37,000 on-going cost per year	**$95,000**	**7 years**	**$37,000 per year**	**$64,142 per year**

** Annual TCO = "Total Cost of Ownership" is equal to the initial cost divided by its lifespan, multiplied by two (assuming the replacement cost will double over its life), plus the annual cost to maintain it annually.

2.C.06 Projected Future Needs

List Other Needs that you are certain will be needed in future years. This can include staffing, equipment, facilities and all other needs.	**Year**		
	Next Year 2019-2020	In Two Years 2020-2021	In Three Years 2021-2022
1. Hardware Replacements Justification: system standardization of servers, workstations, hardware, operating systems, av system, desktop software. 5- and 7-year replacement plans, PC, Laptops, printers - lifespan 5 years Server - storage replacements – lifespan - 7 years Phones – lifespan – 5 years.	**$343,000**	**$82,500**	**$102,250**
2. Multi-Factor Authentication for IDP Justification: multi factor authentication for Shibboleth, AD and Ethos Multi-factor authentication (MFA) can play a crucial role in SCCCD's cybersecurity overall strategy. Providing a more complex security method for login, MFA requires additional verification *before* users have access to protected data. Any time we are dealing with sensitive business data, we need to take care to elevate security measures. But cybersecurity trends are always changing. MFA actually does provide additional network security.	**0.00**	**$322,000**	**$110,000**

Multi-Factor authentication is all about making it more difficult for hackers to access our institutions' sensitive data, email addresses, files, company credit card numbers, health information, grades, PII, sign-in information and financial aid and finance information.			
3. Security Posture Justification: Improve security posture / network path isolation. Security assessment. Strengthen our planning to ensure reliable access, safety, and security of information.	**$90,000**	**$40,000**	**$25,000**
4. Role Based Permissions Justification: AD consultants and role-based permissions for all enterprise applications Role-based access control (RBAC) restricts network access based on a person's role within the district and has become one of the main methods for advanced access control. The roles in RBAC refer to the levels of access that employees have to the network. Employees are only allowed to access the information necessary to effectively perform their job duties. Access can be based on several factors, such as authority, responsibility, and job competency. In addition, access to computer resources can be limited to specific tasks such as the ability to view, create, or modify a file. As a result, lower-level employees usually do not have access to sensitive data if they do not need it to fulfill their responsibilities. This is especially helpful if you have many employees and use third-parties and contractors that make it difficult to closely monitor network access. Using RBAC will help our district in securing your company's sensitive data and important applications.	**$60,000**	**$15,000**	**$8,000**

5. Additional IS Staffing: Exec Asst to CTO; Applications Administrator, Camera Specialist; [add more as needed] Justification: sustainable support structure / specialized IT staffing resources. The IS Department has no clerical assistance but have a tremendous clerical burden. IS Dept has Director and Helpdesk Technician performing this work. The amount of enterprise applications has grown by 300 %, but we have no one who is provisioning users properly or applying any role-based access or security settings, not providing any training on these applications. The security camera system has grown, as has the platform Milestone and as we consolidate to one DW system, we need a full-time technical employee who is trained on the configuration of the IP cameras, milestone, video surveillance and chain of custody. Would be working with the PD and HR as well as business offices.	**Exec Assistant** **$60,000**	**Apps Admin** **$75,000**	**CCTV tech** **$60,000**
6. Implement One Helpdesk System Software Justification: Implement One helpdesk system software, rather than 5 separate systems. This is part of the recommendations of the tech plan. A help desk is a multi-dimensional resource, designated to help in reducing downtime in IT services and functions and making them available for maximum time. It is specially focused on end user functionality, and, thus, is responsible for quick resolution of immediate needs, incidents and technical issues of end users. Any basic functioning help desk needs to have the ability to provide technical support to get an end user back into functioning mode. As a matter of best practice, help desk usually utilizes special software to record, track and manage issues raised. Additionally, the guidance included in Information Technology Infrastructure Library (ITIL) methodology is leveraged for optimal performance.	**$110,000**	**$43,000**	**$43,000**

Some of the features of an effective help desk are: • Tracking capability for all incoming incidents • Functions as Single Point of Contact (SPOC) for IT support • Offers basic problem management, contains issue escalation procedures and is supported by outside specialty groups for higher degree incidents • Concentrates on incidents and issues of end users • Collaborative and easy to use • Maintains database of all reported incidents and actions taken • Ability to create monthly , half-yearly and annual reports on the number of issues, response time, time taken to fix the issue and integration of such parameters into a Service Level Agreement (SLA)			
7. Find, document, inventory and reprogram shadow databases Justification: Consolidation of systems and databases It is a strategic initiative of the tech plan. Shadow databases are not secure and there is no data quality or data governance being applied. One of the main reasons shadow databases create such a problem is because manually updating and syncing information between a centralized database and a shadow database can be time-consuming and, consequently, is often overlooked. This leads to old, incorrect data living somewhere – either in the shadow databases or the central database, or more likely, both. Other problems with shadow databases include: • Shadow databases typically aren't adequately secured or backed up • No one is designated to update and cleanse the shadow data • Shadow data leads to disparate and conflicting reports, and inaccurate analysis	**$50,000**	**10,000**	**2,500**

• But above all, shadow databases create inefficiencies. In today's competitive landscape, it's critical to maintain operational efficiency, intuitive processes and a great customer experience; shadow databases can derail all of these objectives. Lifespan – 10 years			
8. Justification: **New Software – see IS project list** As approved by DTAC, DW software; data analytics, security software, touch net expansion, contracts managements, programming, and Time-Clock-Plus expansion. DTAC has determined the priority of new software initiatives and SCCCD will be using an RIO model to determine the purchasing and implementation process. lifespan – 7 years	**$250,000**	**60,000**	**60,000**
9. Reorganization of technical departments Justification: reorganization of technical departments. Implement UC Berkley's ONE IT plan; become ONE IT Dept. Follow Contra Costa, Venture and Kern models. Moving IT personnel into a single building; streamlining and consolidating the help desk and desktop support functions; standardizing services, desktop images and storage; adopting and migrating to Office 365 and other productivity tools districtwide; and centralizing IT purchasing. The overall consolidation effort will deliver impressive results: IT personnel can also devote more time to innovating and improving customer service. There's an economy of scale that's pretty significant once you standardize and consolidate. Savings drive to the bottom line, and that allows the colleges to focus on the high-value support of faculty, teaching, learning and research while central IT takes care of all the utility work.	**Efficiency and communications**	**Big Savings / millions of dollars**	**Cross training and support**

Higher education consolidation projects are becoming more common as institutions look for new ways to drive down costs, reduce redundancy and make smarter use of resources. Such efforts can take many forms: bringing together distributed IT personnel under a single IT department; creating shared services and infrastructure across disparate campuses; and consolidating autonomous IT teams into one. Centralization as an opportunity to not only streamline operations but also step up our game. A comprehensive IT service management solution that provided new functionality, including change and problem management, a service catalog and a centralized knowledge repository. A collection of individual remote support tools could be replaced with a common new tool Service desk support can be offered to end users on a 24/7/365 basis, through one main telephone number. We will have a much bigger perspective on everything because we have a lot more visibility. Incidents are resolved significantly faster, and the service desk will see an increase in its first-call resolution numbers. We could track users and incidents effectively and know who's working on what and what's being resolved. Rather than always reacting, we could be proactive. We could move technicians into roles that draw on their individual strengths and provide them with a much clearer focus, rather than expecting them to wear multiple hats. The new structure also will give personnel more opportunities to interact with IT leadership, which will led to improved teamwork and understanding.			
10. **Emergency call box replacements and elevator phones** Justification: aged out and beyond repair, need total replacement. Lifespan 10 years. $274,500 initial cost and $13,000 on-going	**$274,500**	**$13,000**	**$13,000**

11. Offsite backup and storage Justification: Provide an offsite backup and storage to address O365 OneDrive, e-mail and SharePoint recovery needs and availability to data through high availability access.	**$165,000**	**$320,000**	**$200,000**
12. Action plan from Ellucian Justification: training and upgrades to make best use of our ERP. Follow guidelines presented by consultant. Engage Ellucian to evaluate the overall use of our ellucian solutions by staff and determine where opportunities exist to increase the efficiencies and maximizing our return on investment. Align institutional goals with actionable initiatives that will result in increased productivity.	**$67,000**	**$12,000**	**$12,000**
13. **Web consulting only** Justification: – re-write web pages and design, provide extra help We want our district to succeed in today's world of digital natives, your website has to do more than simply "look good." It has to attract attention, captivate readers, build rapport, and move them to take action. Only with the implementation of a strong marketing strategy will our website: • Generate qualified sales leads • Expand your customer base • Increase sales and profits • Reduce costs A hard working website is one that is designed around a clear vision and solid business goals. Web consulting help us pair a realistic business strategy with a high-performing website.	**$107,000**	**$22,000**	**$55,000**

14. Relocate/re-assign LMS subject matter expert to District Office Justification: The LMS system doesn't have anyone coordinating initiatives and support from the district level. Life Span – 7 years. $68,000 one-time cost and $68,000 on-going cost per year	**$68,000**	**$68,000**	**$68,000**
15. New Firewalls Justification: The Firewalls are reaching end-of-life Life Span – 3 years. $185,000 one-time cost and $12,000 on-going cost per year	**$185,000**	**$18,000**	**$12,000**
16. Accessibility Training, software Justification: Specialist who administers software and provides on-going training, support and oversight. Complying with the Americans with Disability Act (ADA), and other building accessibility codes and requirements can be a complex and challenging process. A registered accessibility specialist (RAS) can help us smoothly navigate through every phase of our projects to achieve accessibility and avoid any costly headaches arising from noncompliance. Web accessibility means more than checking boxes to adhere to a law or guidelines. Functional web accessibility is about the user experience (UX) and ensuring that all web visitors can access and use your site. While automated web accessibility testing programs are useful for finding problems fast, fixing these issues often requires the help of a web accessibility specialist.	**$85,000**	**$85,000**	**$85,000**
17. Expanded Ellucian Support Justification: Expansion of support agreement to include additional hours for additional modules and features added. Training opportunity for programming staff. We are limited on the amount of hours our programming staff can contract ellucian for support. As we expand the use of the ERP, additional support hours will be necessary.	**$12,000**	**$12,000**	**$12,000**

18. Contract Services for Ellucian Partners Justification: Integration into Ethos, Colleague and SQL. Ethos integration is the future of the ERP with partner products. It will be used for identity management, ETL processes, API's and data sharing. Very few partners have any experience using Ethos and it is a recommendation in our tech plan.	**$35,000**	**$35,000**	**$35,000**
19. Maintenance for all Juniper core switches Justification: support and maintenance for all core switches. Our core switches connect all other switches in the district. Allowing the maintenance to lapse, isn't an option. The colleges have a history of allowing this maintenance to lapse and this is a fundamental need for disaster recovery.	**$60,000**	**$60,000**	**$60,000**
20. Inventory System for all districtwide assets (Finance) Justification: Much needed and overdue DW inventory management system. This is a requirement of our districtwide tech plan. It will provide the business leaders of the district clear insight to assets and a replacement, life cycle for equipment. Important to disaster recovery and business continuity. Must happen for good budget management planning.	**$86,000**	**$66,000**	**$66,000**
21. Scanning conversions Justification: Hire a small team to convert larger department's paper records to digital format. Department and divisions would like to dump their paper records and move to digital storage. CTC, Legal and HR are great candidates.	**$175,000**	**$55,000**	**$98,000**