INSTITUTIONAL PROGRAM REVIEW 2011-2012 - Program Efficacy Phase
Administrative Services

Purpose of Institutional Program Review
Welcome to the Program Efficacy phase of the San Bernardino Valley College Program Review
process. Program Review is a systematic process for evaluating programs and services annually. The
major goal of the Program Review Committee is to evaluate the effectiveness of programs, and to make
informed decisions about budget and other campus priorities.

The Institutional Program Review Committee is authorized by the Academic Senate to develop and
monitor the college Program Review process, receive unit plans, utilize assessments as needed to
evaluate programs, recommend program status to the college president, identify the need for faculty
and instructional equipment, and interface with other college committees to ensure institutional
priorities are met.
The purpose of Program Review is to:
- Provide a full examination of how effectively programs and services are meeting
  departmental, divisional, and institutional goals
- Aid in short-range planning and decision-making
- Improve performance, services, and programs
- Contribute to long-range planning
- Contribute information and recommendations to other college processes, as appropriate
- Serve as the campus' conduit for decision-making by forwarding information to or
  requesting information from appropriate committees

Our Program Review process is two-fold. It includes an annual campus-wide needs assessment in the
fall, and an in-depth review of each program every three years that we call the Program Efficacy
phase. Instructional programs are evaluated the year after content review, and every three years
thereafter, and other programs are placed on a three-year cycle by the appropriate Vice President.

Three committee members will be meeting with you to carefully review and discuss your
document. You will receive detailed feedback regarding the degree to which your program is perceived
to meet institutional goals. The rubric that the team will use to evaluate your program is included with
this e-mail

When you are writing your program evaluation, you may contact efficacy team assigned to review your
department or your division representatives for feedback and input. The list of readers is being sent to
you with these forms as a separate attachment.

Forms are due back to the Committee Chairs, Reviews and Division Dean by ==November 2, 2011.==
It is the writer's responsibility to be sure the Committee receives the forms on time.

In response to campus wide feedback that program review be a more interactive process, the
committee piloted a new program efficacy process in Spring 2010 that included a review team who will
interviews and/or tour a program area during the efficacy process. Another campus concern focused on
the duplication of information required for campus reports. The efficacy process will incorporate the

Educational Master Plan One-Page Summary (EMP Summary) and strive to reduce duplication of information while maintaining a high quality efficacy process.

Program Efficacy, 2011- 2012

Please complete and attach this cover sheet as the first page of your report.

Name of Program:

Campus Technology Services

Name of Division

Office of the President

Name of Person Preparing this Report	**Extension**
Rick Hrdlicka	8656

Name of Department Members Consulted

Mark Byrd, Anselmo Escobedo, John Feist, Craig Ferguson, Jonathon Flaa, Steve Race, and Gabriel Roseli

Program Reviewers

Cory Schwartz; Michael Mayne*; Sandra Waters

Work Flow	Due Date	<mark>Date Submitted</mark>
Date of initial meeting with department		9/26/11
Final draft sent to the Program Review/President	10/19/11	10/19/11
Meet with Program Review Team to review draft	10/21/11	10/21/11
Meet with department to review final Document		10/31/11
Report submitted to Program Review Team	11/02/11	11/02/11
Meeting with Review Team		

Program In Brief

Program Being Evaluated

Campus Technology Services

Program Description

Please use the space provided below to briefly describe the services and/or instruction provided by your department.

The CTS Department is a service oriented department that supports all technology located on the SBVC campus.

We install, maintain, configure and service computer based hardware and software along with the network infrastructure that includes switches, cabling, servers, and other networking equipment.

The following district owned equipment is supported: computers (laptops, desktops, tablets, and servers), copiers, printers, audio visual (VCR, DVD, LCD projectors, smart classroom technology, speakers, amps, TV/flat panels, microphones, etc.), wireless, switches and technology based systems.

We use the helpdesk system to support campus/district owned systems used by students, faculty and staff.

We maintain all of the academic computer labs and classroom technology.

We support the backend equipment for all the academic systems on the campus and work with District Computing Services to support the backend equipment for all the administrative systems.

We consult with the campus community as needed to evaluate, specify, and purchase software/equipment that we then deploy to the campus.

We work with the Technology Committee to develop standards and procedures for technology.

Staffing

Please list the number of full and part-time employees in your area.

Classification	Number Full-Time	Number Part-time, Contract	Number adjunct, short-term, hourly
Managers	1	0	0

Classified Staff	7	0	0
Total	8	0	0

Part I. Questions Related to Strategic Initiative:
Access

Strategic Initiative	Institutional Expectations	
	Does Not Meet	Meets
Part I: Access		
Demographics	*The program does not provide an appropriate analysis regarding identified differences in the program's population compared to that of the general population*	*The program provides an <u>analysis</u> of the demographic data and provides an interpretation in response to any identified variance.* *If warranted, plans or activities are in place to increase services underserved populations.*

Campus	
African-American	18.55
Asian	4.42
Native American	0.74
Pacific Islander	1.35
Filipino	1.91
Hispanic	48.62
White	20.32
Multi-Ethnicity	1.35
Unknown	3.48
% - Male	41.4
% - Female	58.4
Disabilities	4.5

How does the department provide services that are to relevant to the diverse population of San Bernardino Valley College.

Technology is provided to all students, faculty and staff.

Wireless access has been installed in all buildings and in prominent outside areas of the campus.

Students with disabilities compose 4.5% of our population. Software has been purchased to provide access to computers and is installed in all open lab areas, DSPS labs, and instructional labs as needed. Also furniture that allows access to wheelchairs has been installed into all computer labs.

Phones for the deaf and hard of hearing have been installed in the DSPS office and the adjunct office that supports the faculty who teach American Sign Language.

There are 1664 computers on campus. The campus has 45 different student computer facilities containing 1078 computers that are dedicated for student use. Some of these systems have permanent locations whereas others are portable laptop systems. These student systems can be divided into three categories:
1. Open labs – These are locations where students can use labs outside of classroom hours. These labs are not reserved for any classroom activities.
2. Instructional labs - These labs are tied to an instructional program and generally are not available for use outside the discipline.
3. Service labs – These labs are tied to service areas, such as EOPS, DSPS, Success Center, and Assessment.

Computer Lab Facilities

Area Type	Number of Labs	Quantity of Computers
Open Lab	5	126
Instructional Lab	25	733
Service Lab	15	219
	45	1078

Computers have been provided to all faculty and staff either as a dedicated system or in shared use areas. For example computers are made available to adjunct faculty in facilities around the campus.

Pattern of Service

Strategic Initiative	Institutional Expectations	
	Does Not Meet	**Meets**
	The program's pattern of service is not related to the needs of students.	**The program provides evidence that the pattern of service or instruction meets student needs.** **If indicated, plans or activities are in place to meet a broader range of needs.**

Describe the pattern of service and/or instruction provided by your department, and how it serves the needs of the community.

Campus Technology Services provides support to the entire campus community. In Spring 2011 Campus Climate surveys were sent to faculty, students and staff the results of these surveys show customer satisfaction. Information collected from the portions of those surveys that relate to technology is listed below.

Faculty 2011	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion	Agree > or no opinion
The availability of computers and software on campus is adequate for me to do my job.	21.4%	44.3%	20.0%	7.1%	7.1%	72.8%
Campus technology support is adequate.	17.4%	47.8%	17.4%	11.6%	5.8%	71.0%
The computers and others[sic] resources on campus are adequate to meet the needs of my students	15.7%	50.0%	22.9%	4.3%	7.1%	72.8%

We were unable to obtain the actual number of the faculty surveyed and the number of them who responded. The faculty surveys show a lower overall satisfaction rate compared to students and staff. This may be due to the fact that the faculty has been at the bottom of the computer rotation cycle for many years. During this time they have only received used computers. Recently we have only been able to give faculty moving into the newest building new computers. This has changed however, we were given rotation funds from the district this year and all faculty will have the opportunity to receive a new computer to replace their older system.

Student 2011 - Please rate how satisfied or dissatisfied you are with each of the following aspects of SBVC technology.	1-Totally Dissatisfied	2	3	4	5-Totally Satisfied	Total	% of total 3 or >
Campus computer laboratories provide me with adequate access to computers.	30	25	144	177	321	697	92.1%
Campus computer laboratories provide me with adequate access to the Internet.	34	19	125	188	329	695	92.4%
SBVC Website.	41	39	106	226	274	686	88.3%

We were not able provided the information on the number of students responding to the Campus Climate survey. The survey was sent to all students via their campus email address. Overall the students that responded to the survey are satisfied with access to computer labs and the Internet. Scores were lower for the SBVC Website. However, we have since launched our new website, and we have received many positive responses about the website.

Classified Staff 2011	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion	Total Respondents	Agree > or no opinion	%agree or no opinion
Technology Planning is integrated with institutional planning.	8	20	2	2	16	48	44	91.7%
There is adequate availability of computers and software to do my job.	12	22	8	2	3	47	37	78.7%
The college systematically reviews updates its technological infrastructure and equipment to meet programs and services.	6	28	6	2	5	47	39	83.0%

We were not provided the number of staff responding to the Campus Climate survey. The

survey went to all staff on campus. The low satisfaction rates in reference to adequate computers is not quite as low as faculty reported because many departments were able to leverage funding related to grants and categorical programs to keep their computer systems current.

Part II: Campus Climate

Strategic Initiative:	Institutional Expectations	
	Does Not Meet	**Meets**
Campus Climate	The program does not demonstrate how it has contributed to the reputation, safety, or aesthetic appeal of the college	The program provides evidence that it has contributed to the reputation, safety, or aesthetic appeal of the college Program has plans to increase the reputation, safety and aesthetic appeal of the campus.

Please describe briefly what your program has accomplished to maintain the reputation, safety, and the aesthetic appeal of the campus? Indicate future plans or goals to increase maintain the reputation, safety, and the aesthetic appeal of the campus?

Centralization of services:
After much planning by the Technology Committee, in October 2009 with the hiring of a Director of Campus Technology Services the department was born. Prior to that time technology systems and services on the SBVC campus functioned within silos. There were four Technology Support Specialists each working for different Instructional Divisions on campus and each with their own network of computers. This left many areas uncovered in the area of technology support. Also Audio Visual services were under the supervision of the Library. Support for staff and faculty was conducted on a hit or miss basis. District Computing Services supported some staff but not all of them and it did not support faculty at all. There were loose agreements with the Technology Specialists to support the faculty in nearby divisions. Technology on campus grew faster than the support structures could handle and something had to be done to bring the system into balance.

CTS is composed of seven classified staff and one manager that supports all of the technology on campus.

This new organizational model has allowed everyone on the campus to get equal technology and support. Much work has been done to bring the disparate network systems into one cohesive system. As of August of 2011, all academic computer systems are on one cohesive network. As part of this centralization of network systems, a new core server system based on virtualized technology was created.

A wireless network was installed using TitleV funds prior to the creation of CTS. Students, staff, and faculty use the system. There are an average maximum of 575 users each day on the wireless system. The system that was installed is very difficult to manage and funds have been identified to upgrade the management portion of the system.

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In the Spring of 2011, a new Website was launched for SBVC with the use of TitleV funding. The new site has received positive reviews and was developed so that staff and faculty can keep the site updated easily.

We plan to increase the reputation, safety and aesthetic appeal of the campus by developing a web page for the CTS department. This web page will have a FAQ section with answers to important technology related questions. There is a section with vendor discounts for students, faculty, and staff. There will be a page of tutorials and finally there is a page underdevelopment for important forms.

The ongoing deployment of computer systems and classroom technology has a positive impact on the college's image.

Part III: Student Success and Institutional Effectiveness

Mission and Purpose:

Strategic Initiative	Institutional Expectations	
	Does Not Meet	**Meets**
	The program does not have a mission, or it does not clearly link with the institutional mission.	The program has a mission and it links clearly with the institutional mission.

SBVC Mission: San Bernardino Valley College provides quality education and services that support a diverse community of learners.

What is the purpose of the program?

What the CTS department does is guided by the Campus Technology Strategic Master Plan. Listed below are the Technology vision, mission, and guiding principles as written in the 2010-2013 Plan.

Technology Vision
In 2010 the Technology Committee reviewed the technology vision and mission that support the SBVC vision and mission. The committee also revised the list of guiding principles for technology at SBVC.
The committee's technology vision:
- Provide the campus with a plan for implementing current technologies.
- Provide Campus Technology staff with effective training that allows them to meet the technology needs of the campus.
- Provide our students with current technology resources to help them achieve their educational goals.
- Make a positive impact in our community.
- Cultivate partnerships that allow us to continue to serve and benefit our community.
- Effectively manage technology resources for the campus.
- Obtain revenue resources to adequately support technology initiatives.
- Provide universal accessibility to technology resources for constituents.

Technology Mission
San Bernardino Valley College Campus Technology Services (CTS) provides the campus community with exemplary technology resources and support.

Technology Guiding Principles
- We value effective training and professional development.
- We value the development of technologically literate students.
- We believe the effective use of technology will positively influence the community.
- We value partnerships with our community.
- We promote a climate of continuous improvement for current technologies.
- We embrace emerging technologies.

- We provide services that give faculty and staff the tools needed to reach higher educational standards.
- We strive for excellence in the services CTS provides to the college community.
- We focus on fulfilling the technological needs of the campus community.

How does this purpose relate to the college mission?

The CTS Mission: San Bernardino Valley College Campus Technology Services (CTS) provides the campus community with exemplary technology resources and support.

SBVC Mission: San Bernardino Valley College provides quality education and services that supports a diverse community of learners.

The two missions are closely related and the CTS Mission was developed with the SBVC Mission in mind.

Productivity and Success

Strategic Initiative	Institutional Expectations	
	Does Not Meet	**Meets**
Productivity and Success	The data does not show an acceptable level of productivity for the program, or the issue of productivity is not adequately addressed. Program does not describes how they enhance student success	The data shows the program is productive at an acceptable level. Program describes how they enhance student success
Student Learning Outcomes and/or Student Achievement Outcomes	Program has not demonstrated that they have made progress on Student Learning Outcomes (SLOs) and/or Service Area Outcomes (SAOs) based on the plans of the college since their last program efficacy.	Program has demonstrated that they have made progress on Student Learning Outcomes (SLOs) and/or Service Area Outcomes (SAOs) based on the plans of the college since their last program efficacy.

How does you department measure productivity and customer satisfaction? What does the data reveal about the productivity of your program over a three year period? Include data that is relevant to your program such as:

- Relative status of the department at SBVC in comparison to the same department at other multi-campus districts in terms of
    i. staffing levels
    ii. service area and population
    iii. compliance with state, local, and federal regulations
- Average time to respond to requests for service
- Average time to respond to complaints
- Results of user satisfaction surveys
- Results of employee satisfaction/staff morale surveys
- Additional identified benchmarks of excellence for the department, and department standing relative to these benchmarks of excellence

Productivity is difficult to measure just based on the amount of new equipment deployed each year and the number of Helpdesk tickets completed in a year. There were 17,054 Helpdesk tickets created in the 2010-2011 fiscal year. Valley College technical staff resolved 1094 of those tickets. The Valley College CTS staff are not the only ones working to resolve tickets. A large majority of issues are resolved by the Helpdesk. District and CHC also resolve a number of tickets. However CHC has a separate helpdesk system on its campus so it does not use the district Helpdesk as much as District or SBVC students and employees.

The table below shows the overall number of Helpdesk tickets per month. You will see the three times a year that the Helpdesk tickets peak. These are at the beginning of each semester. We receive an increase of requests during this time. Most of these requests revolve around forgotten passwords and logins for email, Blackboard, Web advisor, Datatel, and other systems.

Tickets Solved by Month (9/1/2010 - 8/31/2011)

Assigned To	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
Helpdesk Total	1101	727	762	1146	2214	1215	800	730	1535	1231	2966	2627	17054
CTS Total	113	105	92	67	139	118	67	70	73	58	75	117	1094
CTS % of Total	10%	14%	12%	6%	6%	10%	8%	10%	5%	5%	3%	4%	6%

However, these numbers do not provide the whole picture. We consistently receive requests for assistance that do not include a ticket. For instance, we go to a site to fix one problem and end up fixing 2, 5, 10, or more issues. Many employees who need technological assistance do not want to take the time to fill out a ticket. Also, no one wants to wait for staff to show up after a ticket is created. Some tickets include replacement of whole labs of computers. Other tickets may involve reloading all the software in a set of labs. For example over summer break we reloaded all of the software in 5 business labs, the library, the new readings labs, RTVF, 2 new labs in PS, nursing lab, Art, and others. These jobs were only listed in 5 tickets. An example of such a ticket is shown below:

Ticket Summary

Ticket #:	8146-15512
Status:	**L2: Closed**
Date Created:	4/28/2011 9:15 AM PDT
Last Updated:	6/12/2011 12:46 PM PDT

Customer Info

Entered By:	**Rick Hrdlicka**
Customer:	Rick Hrdlicka
Email Notification (Customer):	On
Assigned Technician:	John Feist

Ticket Description

Ticket Origin:	SBCCD - Walk In
User Type:	Staff
Location:	San Bernardino Valley College
Request Details:	<< 5-26-11 to 6-15-11>> Remove all old equipment from Old PS and Chem Buildings.
Request Type:	Hardware
Request Type Detail:	Equipment Request
Building & Room Number:	Old PS and Chemistry Buildings

Solution

Solved: (6/9/2011 12:42 PM PDT)	Removed all equipment and furniture per your instructions and guidance.

The campus climate survey does not ask questions about satisfaction with the on campus technical support that employees receive. The surveys that are sent out after a Helpdesk ticket is resolved ask about user satisfaction of the Helpdesk, but not the on-campus technical support staff.

When looking for industry standards in technology in relation to education we found that the International Society for Technology in Education (ISTE) provides assessment and guidelines for educational institutions internationally. In September of 2011 the Director of CTS ran the ISTE Profile for San Bernardino Valley College. This profile very clearly evaluates and makes recommendations to schools in the area of technology. Overall the profile for SBVC is rated at "Satisfactory Efficient". However some areas of improvement and recommendations were provided. Some of the recommendations are below others will be used elsewhere in this document.

Recommendation: The support costs for technology equipment rise exponentially when it is left in service beyond its normal expected life. Most school districts continue investing in older technology equipment even at extraordinary cost and limited capability because a systematic replacement cycle has not been adopted. An adopted cycle (3-5 years), either through equipment leasing or by purchase and replace is recommended for your school district.
Cost: Significant

Recommendation: Decades of funding issues in schools has created a culture that uses every resource to the very end of its life. Unfortunately with technology when equipment has reached the end of its reasonable life it begins to cost the district enormous resources to keep it in service. Even if no support is provided, staff time for troubleshooting and other indirect resources are substantial. Like textbooks that are replaced and surplussed on a cycle, technology should be surplussed after its usable life even if the equipment may still work. This strategy can be challenging for districts that have a culture of extreme frugality or do not have an adopted upgrade cycle.
Cost: Neutral

Recommendation: In many organizations up to 25% of the supported technology devices may be peripherals (printers, digital cameras, scanners, etc.). Even with strong computer standards, peripheral standards are required to minimize support challenges. This is especially true of peripherals that are accessed on the network (printers). It is recommended that peripheral standards are put into place with limited models so that effective support can be provided. Further, consumer products that are not designed for an enterprise networked environment should be discouraged.
Cost: Minimal

Recommendation: Every software application introduces a new set of variables for support personnel. In addition to application functionality, each software application interacts with the operating system and all of the features of the district's technology solution. Each application that is used should be tested before it is introduced for full deployment. A list of tested applications and the known issues should be made available to users. To completely contain technical issues, installation of applications that are not on the list should not be permitted.
Cost: Neutral

Recommendation: Certainly the most challenging (and costly) issue related to technology support in schools is staffing. Most private industries staff technical support with a technician for every 50 to 100 computers. School districts, on the other hand, will commonly see ratios of 250:1 or greater. It is recommended that technology staffing is prioritized to ensure that downtime is minimized and that staff and students can readily depend upon the district's technology.
Cost: High

Recommendation: Unlike the business environment that supports a relatively limited number of software applications, in education there are hundreds of titles. In today's environment it is impossible to fully support every product. It is important to establish guidelines for support that will help guide in the purchase of software, and will establish reasonable expectations for staff. This typically results in a list of software with different categories of support and expected action. So that support activity matches employee expectations, it is recommended that a supported software list and protocols is put into place.
Cost: Neutral

Each of the items above impact the ability for the CTS Department to provide efficient services. The department and the campus will need to look at ways to address these recommendations if we desire to have a more efficient department.

Describe how the program enhances student success

Student success is enhanced by providing reliable technology in open, academic, and student service labs, as well as access to the Internet, and wireless services throughout the campus. Students who attend SBVC face many challenges. Most of our students are in a low socio-economic status where 89% of our students receive financial aid Most are the first generation college students. By providing reliable technology on campus we are providing access to these students.

Student Learning Outcomes and/or Student Area Outcomes
Demonstrate that your program has continued to make progress on Student Learning Outcomes (SLOs) and/or Service Area Outcome (SAOs) based on the plans of the college since the program's last efficacy report.
See Strategic Initiative 5.1

Campus Technology Services Department is new and has not developed any Service Area Outcomes, nor have we been asked to do so.

We plan to identify, write, submit, evaluate, review, and update our SAOs when asked to do so.

Part IV. Planning

Strategic Initiative	Institutional Expectations	
	Does Not Meet	**Meets**
Part IV: Planning - Rubric		
Trends	The program does not identify major trends, or the plans are not supported by the data and information provided.	The program identifies and describes major trends in the field. Program addresses how trends will affect enrollment and planning. Provide data or research from the field for support.
Accomplishments	The program does not incorporate accomplishments and strengths into planning.	The program incorporates substantial accomplishments and strengths into planning.
Challenges	The program does not incorporate weaknesses and challenges into planning.	The program incorporates weaknesses and challenges into planning.

What are the trends, in the field or discipline, impacting your student enrollment/service utilization? How will these trends impact program planning?

The current greatest trends in technology are:
- Cloud computing – The process of moving computing environments into the Internet or intranet. This allows for anywhere anytime access to resources that include data and software applications.
- Mobile computing – The proliferation of smart phones and tablets (including Android, iPads, iPhones) has changed the definition of a computer. The users of these devices are demanding that the organizations that they interact with have applications that work with all of their devices.
- Virtualized servers – Not too far in the past we purchased new server hardware for each server we wanted to deploy. Replacing this equipment was difficult and time consuming. With the rapid growth of computing power we are able to run multiple virtual servers on one piece of hardware. This lowers the cost of equipment and energy while making it easier to move services between hardware seamlessly.
- Virtualized desktops – This is the next step after virtualized servers. Many relate this to the computing days in the past where all of the computing happened on a server. This technology allows organizations to use their high-end server systems to provide their clients with a reliable, repeatable computing experience in a secure way.
- Virtualized applications – Installing and configuring applications on desktop computers can be tedious. By moving to virtualized applications the user gets a full desktop experience and the individual applications get processed on the server.
- Electronic books – Electronic books are taking shape in many different formats. We can access electronic books via web pages, mobile devices, specialized readers, or personal computers. It is still uncertain which technology will prevail.

We have already deployed virtualized servers and some faculty members have begun electronic books in their classes. ee have the technology in place to support this development. We are planning to conduct some test deployments in the area of virtualized desktops, mobile computing and virtualized applications in the next two years. Some of these technological developments will impact the program in the way we deploy services and equipment. These new technological improvements will allow for new methods of instruction and instructional delivery.

ISTE makes some recommendations in the area of virtualized desktops:
Recommendation: A thin-client is a computer that does not serve as a full-functioning stand-alone PC. The Operating system and applications actually run on a remote server and are all centrally controlled and managed. As a result, the hardware requirements for the end-user are typically substantially less. In addition a thin-client strategy allows a small staff to ensure that users experience a consistent environment and that critical updates and software upgrades can be easily and quickly deployed. While the hardware

requirements are very low for the client, they are very high for the server. Costs for hardware and software are marginally lower or neutral but support costs can be dramatically decreased. It is recommended that a thin-client computing environment should be considered for administrative applications that have little or no multi-media requirements and where end-user hardware requirements may be challenging.
Cost: Moderate to High

Accomplishments and Strengths
Referencing the narratives in the EMP Summary, provide any additional data or new information regarding the accomplishments of the program, if applicable. <u>In what way does your planning address accomplishments and strengths in the program?</u>

We have not been asked to create an EMP summary. As a new department we did not exist during the creation of the Educational Master Plan.

This year the CTS department received funding to expand its budget. This expanded budget now covers the copier contracts, printers, LCD projector bulbs, and departmental software needs.

As part of the campus's support for Copiers/Printers was centralized in the CTS department. Prior to this, each area purchased and maintained its own copiers and printers. This created much inefficiency including inconsistent brands, contracts, overstocking of supplies, under budgeted repairs, and infrequent maintenance. Since moving to this new model, all copiers on the campus are under one lease and maintenance program budgeted for in the CTS budget. Also, all printers are supported and purchased by the CTS department. Campus departments purchase their toner directly from the CTS department. This model encourages the departments to use the copiers for printing. This partially addresses ISTE's recommendations:

Recommendation: In many organizations up to 25% of the supported technology devices may be peripherals (printers, digital cameras, scanners, etc.). Even with strong computer standards, peripheral standards are required to minimize support challenges. This is especially true of peripherals that are accessed on the network (printers). It is recommended that peripheral standards are put into place with limited models so that effective support can be provided. Further, consumer products that are not designed for an enterprise networked environment should be discouraged.
Cost: Minimal

Since the development of the CTS department. we have been able to leverage the idea of bulk buying. We have relationships with Dell, Microsoft, Apple and other vendors that provide discounts when buying in bulk.

A change in classroom technology is modifying the way Audio Visual staff within the department function. Previously, AV staff delivered technology to the classroom as needed. We have now installed technology in a majority of the classrooms. This equipment is more computerized and requires that staff that used to just deliver equipment to the classroom, now work more with the computer systems that support this technology. This is a change in job duties and will require a change in job classification at some time in the near future.

District funding a five year technology equipment rotation has been put into place. The campus has been allocated 533 thousand dollars to replace 1/5 of the computers, and other aging technology on campus.

Challenges
Referencing the narratives in the EMP Summary, provide any additional data or new information regarding planning for the program. <u>In what way does your planning address trends and weaknesses in the program?</u>

Our computer to technician ratio is substantially high at 330:1. That is 330 computers for each technician to support. If Audio Visual personnel (who are not currently classified computer support personnel) as are included in the ratio it is still high at 237:1. ISTE lists a ratio between 75:1 and 150:1 to meet satisfactory efficiency. To address this discrepancy, we will need to add staffing in the technology department. See ISTE Recommendation below:

Recommendation: Certainly the most challenging (and costly) issue related to technology support in schools is staffing. Most private industries staff technical support with a technician for every 50 to 100 computers. School districts, on the other hand, will commonly see ratios of 250:1 or greater. It is recommended that technology staffing is prioritized to ensure that downtime is minimized and that staff and students can readily depend upon the district's technology.
Cost: High

There is a definite lack of one time use lab space on campus. The department has no lab space that it can loan out to divisions, departments or other entities to use for special events, training, or classes that do not require daily use of the labs. It is advisable to develop lab space that can be used for this type of purpose.

Computer labs around campus are owned by specific departments, divisions, or programs. This creates a several challenges. One challenge is listed above in the lack of CTS department owned lab space. Another is that much of this lab space sits unused because it is not offered or allowed to other departments for use. Moving toward computer lab space that is assigned to classes as needed would make for better use of existing resources and would reduce the need to expand the number of computer lab facilities.

Older buildings provide many challenges. Lack of electrical and network locations, and infestation of rodents are destroying network cabling are two major issues. Furthermore classrooms are not designed to allow installation of smart classroom technologies comparable with that in new buildings. Ideally, these buildings will be replaced or remodeled in the near future. If that does not happen, funds will need to be identified to keep these systems running or to update them.

New buildings also present a challenge in that the equipment in those buildings is more expensive to maintain and replace. A budget will need to be identified to maintain the new smart classroom technologies that have been deployed.

One final challenge that exists is that since our department was created by bringing together personnel from different departments; we have no one place that contains all the technical staff and resources. It has been noted that we have some newly furnished spaces in the PS building. However, it cannot accommodate all the staff and ongoing projects that we have. We space in PS, Old CDC, Library, LA, Art and others. Our team would be more efficient if we had one single location with enough space to accommodate all of our needs. Ideally technology services and all of our various locations could be housed in a new building design such as in Liberal Arts or Technical.

V. Questions Related to Strategic Initiative: Technology, Campus Climate and Partnerships.

Part V: Technology, Partnerships & Campus Climate	
Program does not demonstrate that it incorporates the strategic initiatives of Technology or Partnerships.	Program demonstrates that it incorporates the strategic initiatives of Technology or Partnerships.
Program does not have plans to implement the strategic initiatives of Technology or Partnerships.	Program has plans to further implement the strategic initiatives of Technology or Partnerships.

Describe how your program has addressed the strategic initiatives of Technology or Partnerships. What plans does your program have to further implement these initiatives.

The CTS department's goals are based on the Campus Technology Master Plan which was used to strategic initiatives.

We **partner** with the districts Technology and Educational Support Services (TESS) committees to develop district wide technology plans and goals. The Director of CTS meets bi-weekly with the other technology managers district-wide to ensure that we are all working toward common goals and procedures. Those managers include the Executive Director of TESS, Director District Computing Services, Director of Campus Technology Services – Crafton Hills, Director of Printing Services, and Director of Edustream.

By centralizing purchasing with three major vendors (Microsoft, Dell, and Apple) we have increased our bulk buying power, and we are able to get these vendors to offer **technology** discounts to our students and employees.

The Director of CTS is a member of the local group of **CETPA (California Educational Technology Professionals Association)** This **partnership** consists of K-20 technologists from Southern California including the K-12 community and higher education.

Below is a list of some of the **Technology** Vendors with which we work:
Apple
Best Golf
CDWG
Cisco
Computer Comforts
Computerland of Silicon Valley
D&D Security
Dell
eInstruction
Extreme
Faronics
Freedom Scientific
Gov Connection
Grainger
Intratek
Konica-Minolta
Lifetime Memory Products
Microsoft
RimRock
Spinitar
Troxell
Others