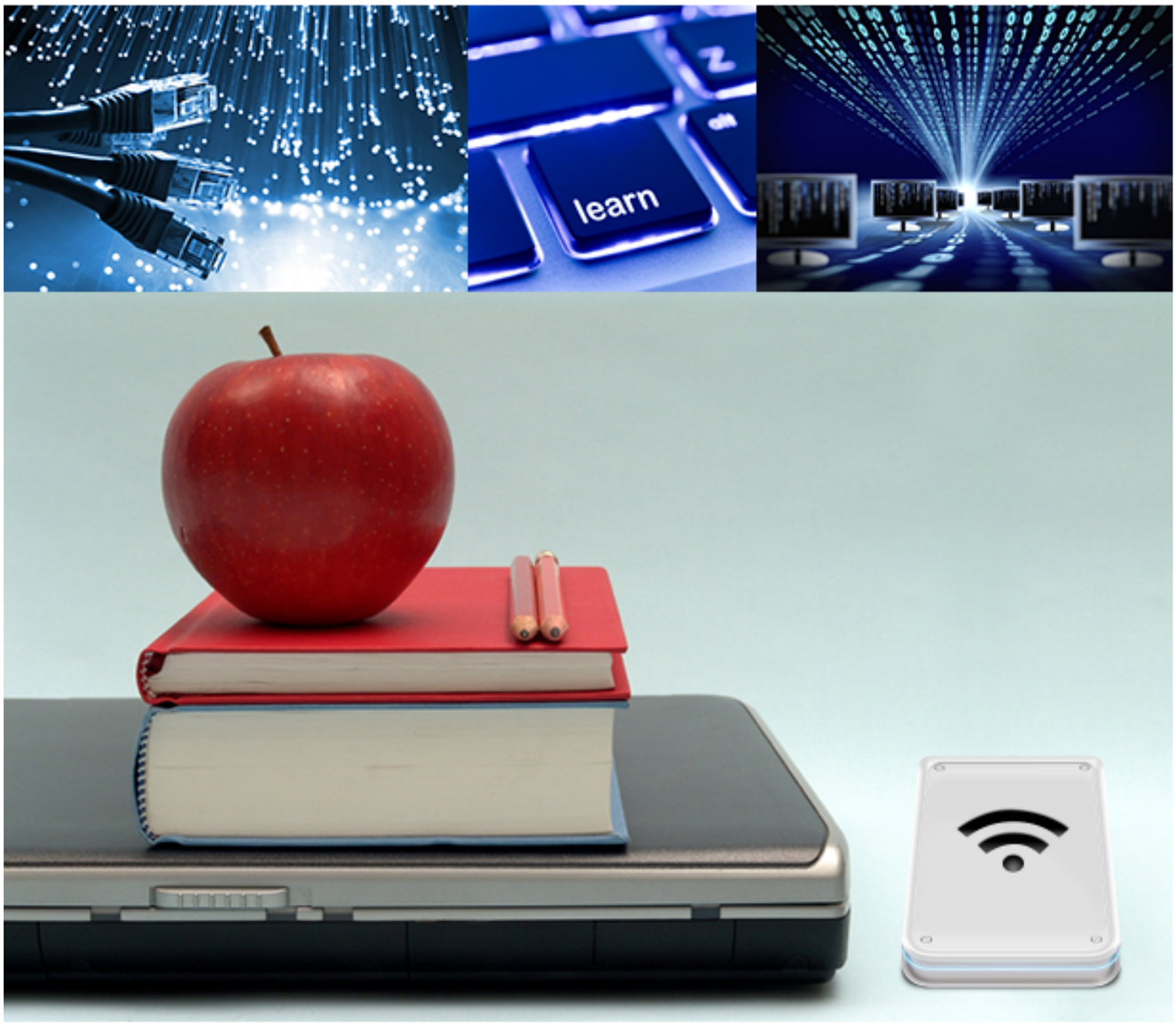
SANTA ROSA JUNIOR COLLEGE

Strategic Master Plan for Technology

2015 and Beyond



SANTA ROSA
JUNIOR COLLEGE

This document was developed by the
INSTITUTIONAL TECHNOLOGY GROUP (ITG)

Current Membership: Scott Conrad (Co-Chair)	**Director, Information Technology**
Will Baty (Co-Chair)	**Interim Dean, Learning Resources and Educational Technology**
Tara Jacobson	**Interim Dean, Instruction & Technical Services/Petaluma Campus**
Li Collier	**Dean I, Student Success & Retention**
Laura Rivera	**Director, Purchasing & Graphics Services**
Mike Roth	**Acting Manager, Instructional Computing**
Russ Bowden	**Manager, Media Services**
Sasun Torikian	**Manager, IT Infrastructure**
Robert Ethington	**Director, Student Affairs and New Student Programs**
Matt Pearson	**Manager, Media Services/Petaluma**
Nancy Persons	**Faculty**
George Sturr	**Faculty**
Jeff Diamond	**Faculty**
Tara Johnson	**Faculty**
Andre Siedentopf	**Classified**
Joshua Pinaula	**Student**

Special tech call out to Josh Adams, Interim Dean, Business & Professional Studies

COMMITTEE FUNCTION:

This group is advisory to the President and provides recommendations and input regarding Districtwide needs as they relate to the integration of technology. The group is responsible for making recommendations in the following areas:

- Planning and coordination
- Policy development
- Acquisitions
- Implementation

Within these four broad areas it is envisioned that this group will provide overall leadership and direction to our efforts throughout the District. Specific duties include:

- Serve as a representative body of primary technology stakeholders
- Develop a strategic planning model that identifies and ranks District technology needs
- Establish specific goals and implementation guidelines
- Create and publish District standards for technology purchase and support
- Approve purchases of equipment to ensure compliance with standards
- Evaluate the impact of technology on instruction and the provisions of support services
- Update and review technology related planning documents as appropriate

COMMITTEE STRUCTURE:

5 Administrators (permanent), 4 faculty, 5 Ex-officio, 1 Classified, 1 Student

Executive Summary

The Strategic Master Plan for Information Technology at Santa Rosa Junior College defines critical needs and technology trends for the next five years. As such, it represents a roadmap of where we need to go with information technology implementation. To draft this plan, the Institutional Technology Group, composed of key personnel involved in the planning, implementation, and support of various technologies, was formed as a presidential advisory group. It is the responsibility of this group to project five years into the future and produce the "Strategic Master Plan for Information Technology".

Basic Assumptions

The Technology Master Plan is a five-year perspective and identifies ongoing technology trends and needs for the District. The following assumptions are of particular significance:

- The focus is comprehensive, District-wide, and inclusive of multiple instructional sites.
- Adequate funding levels need to be identified to successfully implement the plan.
- Baselines for technology, support, and training need to be established.
- The plan is a "living document" and will be reviewed and adjusted on an annual basis, as technology and District needs evolve.
- The plan is modular in nature and most of the initiatives can be implemented independent of the whole.

Technology Themes

The items described in this document cover a broad range of technologies. The following bulleted list is a simple summary of the common themes that appear throughout the full report.

- Student success and access to current technology are synonymous.
- The quality of our learning environments depends on technological currency.
- Our students and staff expect technology to become smaller, faster, and mobile.
- Our installed technology base has greatly expanded and needs to be maintained.
- Wireless technology has become a mature technology able to support learning everywhere.
- The infrastructure that delivers and supports technology must be constantly improved.
- Connectivity, security and bandwidth are the gating factors to end users experience with IT.

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STRATEGIC MASTER PLAN FOR TECHNOLOGY – 2015 AND BEYOND

INSTRUCTIONAL TECHNOLOGY

Instructional Technology

1.0. Instructional Computing Labs and Classrooms

Instructional Computing provides support for approximately 2,700 computer systems (desktops, laptops, tablets, and servers) in a diverse variety of instructional environments throughout the District. Students are provided with access to digital resources required by specific curricula as well as to tools that enhance teaching and learning across all disciplines. Resource tools include a comprehensive offering of computer software titles, informational services via the Internet and library databases, and local networked services such as file sharing, printing, and email.

1.1. Instructional Computing Systems Replacement Fund

Replace instructional lab computers on an average five-year cycle.

Current Environment

Instructional equipment is refreshed in a seven year cycle, which includes replacing computers with used systems in order to keep up with current demands. Using used equipment has placed Instructional Computing in a position of having more than half of its systems approaching seven years old and needing to be replaced. Consistently over time, this lengthy cycle has not been able to maintain adequate computer systems required by approved curricula and changes in software.

Future Plan

Our proposal will be to move to a five year replacement cycle, purchasing new systems to meet the various academic needs throughout the district.

Strategies/Resources

The focus will be to maximize equipment life over the entire group of instructional computers district-wide. When appropriate and cost effective, component level upgrades could at times be implemented, as well as, the redistribution of equipment.

- *$800,000 average annual allocation is needed. This averages approximately 400 computer systems (desktops, laptops, tablets, and servers) with related peripherals replaced per year.*

- *Note: Expanded District facilities and sites currently under construction, being acquired, and listed in the Facilities Plan over the next several years, with included instructional computing environments will require an expansion in this allocation to accommodate scheduled*

replacement of the associated new computer equipment.

1.2. District Academic and Operational Software Site License Funds

Maintain annual funds to purchase District software licenses.

Current Environment

In the past, individual departments and areas independently requested and purchased instructional software packages and associated version upgrades. Funding of these individual requests was hit-or-miss due to competition with other requests from within the cluster. In particular, needed version upgrades were not assured. Finally, the purchase price on smaller, individual orders was more costly than larger-quantity group licensing. With Measure "A" funding, we have been able to-continue to maintain the centralized District Academic and Operational Software Site License Funds to address these issues. This past year the District shifted District wide software licensing to the IT budget (no longer measure bond funded, now General Fund funded). This reduces the software funding demand from the bond fund significantly. However, there will still be bond funding requests for the initial purchases of new software.

Future Plan

As long as funding remains available, we will maintain the District Academic and Operational Software Site License Funds as created.

Strategies/Resources

This fund will continue to centralize purchasing and provide coverage for new instructional and operational software used District-wide. Departments and programs will be expected to demonstrate specific need for software titles based on their official Course Outline of Record.

An average of $50,000 annually is needed for new software.

1.3. New Computer Lab Classrooms

Develop additional computer lab classrooms for teaching.

Current Environment

The need for computers to be used by students as part of curriculum delivery in the classroom has been steadily increasing among several disciplines over time.

The development of needed new computer lab classrooms to accommodate teaching objectives (as opposed to drop-in computer labs for independent assignment work) is currently being addressed through scheduled and planned construction projects.

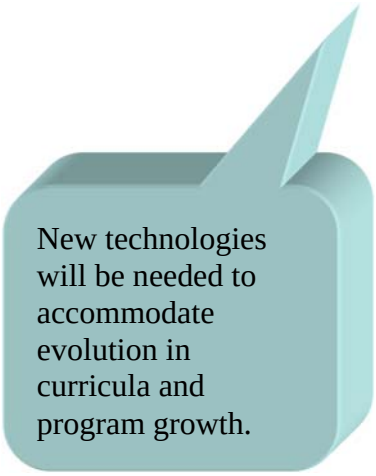
Future Plan

We will continue to assist with planning for implementation of new computer labs at new sites and facilities. In the meantime, we are also endeavoring to assess the viability of repurposing existing facilities to accommodate the growing need for access for programs like Digital Media, Water Resources Technology, ESL, CS, BAD, English, College Skills, and Graphics Design in particular.

Strategies/Resources

- *Initial cost for new computer equipment for new computer lab facilities has been covered in building projects cost via associated F&E lists. Considering the current trend in state funding shortfalls, though, it may fall back on the District to fund related F&E for some future projects.*
- *Ongoing equipment replacement costs for new labs will be covered under the Instructional Computing Systems Replacement Fund in Section 1.1. This replacement fund will need to be augmented to cover these additional computers.*

1.4. Additional Computer Technologies for All Labs and Classrooms



Current Environment

The *Instructional Computing Systems Replacement Fund* in *Section 1.1* does not specifically address the ongoing instructional need to provide additional technologies to support the growth and evolution of approved curricula. The Petaluma Cisco Networking Program/Academy, Water Resources Technology, Help Desk, expanded Chemistry offerings, the Petaluma Digital Media Lab**,** Applied Technology's CAD program, and Doyle Library's Center for New Media are noteworthy examples where curricula must accommodate changes in technology to remain relevant program offerings.

Future Plan

To set aside funding annually for acquisition of needed additional computer technologies for all labs and classrooms.

Strategies/Resources

- *$100,000 average annual allocation will be needed to cover additional computer technologies for all labs.*

1.5. Student Wireless Access

Students will have wireless access to the Internet at Petaluma and SR Campuses, in buildings and outside study areas.

Current Environment

Student and Staff wireless service is implemented at both Santa Rosa and Petaluma Campuses. Please see *Administrative and Office Technology Section 14.3 for additional information.*

Future Plan

See Section 10.2

Strategies/Resources

As needed and requested by Information Technology (IT), Instructional Computing will participate in providing related informational support and assistance to student wireless users.

1.6. Instructional Computer Support for Unsupported Instructional Areas

Several instructional computing areas lack adequate technical support. An additional staff resource is needed.

Current Environment

Many instructional computing environments across the District receive technical support only by virtue of existing local departmental staff in other assignments. A number of departments, though, have insufficient, if any, qualified computer technical staff on board, and unfortunately, a large number of our computer lab facilities and classrooms have been consistently without adequate support. Currently this includes 30 instructional labs and approximately 250 classroom instructor stations throughout the District, including a variety of off-campus venues.

Future Plan

To complete development of a shared, centralized instructional computer support service provided by Instructional Computing that addresses the computer technical support need for all instructional labs and classrooms.

Future plans are to implement, evaluate and enhance a training curriculum that embraces access to education and training opportunities throughout the District.

Strategies/Resources

What is required is an additional fulltime technical position to fulfill this objective.

$85,000 (plus benefits) annually for an additional Instructional Computer Systems Coordinator.

2.0. Library and Information Resources

Libraries and information technology have become synonymous through the integration of technology to all aspects of our operations. Information resources and technology directly support student and faculty learning at the College. From a technology planning perspective, the focus needs to be on three critical areas: 1) information resources and instructional collections (2) Facility upgrades and equipment. 3) library automation systems.

2.1. Information Resources & Instructional Collections

Provide increased student access to on line research databases.

Current Environnent

This category represents the primary collections that directly support student success at the College. These collections are in a variety of formats including: 44 online subject databases, full text resources, ebooks, e-reference collections, and locally created instructional Web pages. All of these collections are treated as a unified District resource and are available at *all* District sites via our integrated library system (ILS) Critical to the issue of technology-based collections and resources is the format and the related storage requirements. This single element has a primary role in the acquisition and organization of our information resources. Physical buildings, the network, and remote databases are all part of our storage solution.

Future Plan

The Library will continue to acquire a wide variety of information formats to meet student needs. Of particular note will be large collections of image files to support curriculum, video-based files, e-books, and special online collections that support specific departments and subject disciplines. All of these collections, regardless of location and format, must be accessible via a single easy-to-use interface.

Strategies/Resources

- *$95,000 annually for digital resources*

2.2. Facilities and Equipment

Current Environment

While the two library facilites are still fairly recent, infrastructure & facility upgrades are on the horizon. The next significant area of

upgrades will focus on: the integration of collaboration technology that supports group work/instruction in the CNM and four groups rooms and a reorganization of the reference area at Doyle.

Future Plan

The most significant planning focuses on the upgrading and revitalization of the CNM facility to support collaboration, the conversion of the reference area at Doyle Library to a learning commons, and the integration of collaborative technologies into four group study rooms

Strategies/Resources

- *$100,000 for collaborative technologies for CNM,*
- *$175,000 for the conversion of the Doyle reference area,*
- *$80,000 for four groups collaboration rooms*

Upgrade the ILS to next generation system.

2.3 Integrated Library System

Current Environment

The Library ILS is currently an older version that will need a significant upgrade to support library services and resources in the future. We currently have to use multiple vendors to provide support for our ILS, our current EDS discovery system and our 360 link resolver. We will be exploring the possibilities of moving to a fully cloud-based system via our current vendor, migrating from Voyager to the Alma/Primo platforms.

This will allow us to standardize on one integrated suite of services, rather than our current use of three separate vendor products.

Future Plan

The Library will need to upgrade its ILS and attendant software to keep pace with the changes information resources, metadata cataloging and shared resources inherent in the next gen-platforms.

Strategies/Resources

- *$47,860 one-time implementation costs*
- *$275,975 for five years subscription/maintenance*

3.0. Distance Education

Distance Education (DE) focuses on the delivery of quality instructional offerings via technology at SRJC. Within this general charge, Distance Education directly supports the online learning program and provides training & support for the instructional program.

Current Environment

In fulfilling its mission, Distance Education performs the following:

- *Acts as the central portal for Distance Education and maintains the necessary infrastructure, including hardware and software to support online instruction.*
- *Provides training in the effective integration and use of educational technology within the instructional program.*
- *Provides the necessary instructional systems and software, to ensure that faculty and instructional departments have the appropriate tools.*
- *Investigates and implements emerging technologies relevant to meeting the needs of the instructional program.*
- *Works collaboratively with other campus service providers, such as Media Services, Instructional Computing, and Information Technology to ensure the quality of the services that it provides.*

3.1. Plan for the selection & migration to a new District CMS

Current Environment

The College is currently using two Course Management Systems (CMS) to deliver instruction to our students. CATE is the original in-house system developed and Moodle is a newer system implemented in the last two years. Both systems are heavily used and the long term plan is to identify and choose a single system that will meet our future and current needs.

The choice of a new system is critical in terms of being able to provide faculty and students with a high quality learning environment. Key components include: ease of use, the ability to add content-rich formats to enhance instruction, scalability for ongoing program growth, integration with District systems such as SIS, and compatibility with statewide efforts. We need to plan and implement for a single integrated system to migrate to and the necessary support resources to complete that migration. Complicating the District choice is the ambiguity surrounding statewide efforts to develop their own course management system.

Future Plan

DISTANCE EDUCATION will work with District Online Committee (DOC) and other campus groups to identify a single system that meets our needs.

Identify and select a single integrated CMS for the College.

- *Provide the necessary support and staffing resources to accomplish this task*

Strategies/Resources

$105,000 for a new online CMS implementation and training

$ 35,000 for a one-time resources to support a migration to new system

3.2. Expand support staff and services for an expanded online learning program

Current Environment

Distance Education provides workshops and training for online course development for our in-house courseware system. In conjunction with Instructional Computing, DE has also been able to assist faculty in individual development projects related to online teaching. However, There are simply not enough human resources (staff) to support an expansion of the online program at this time. Therefore the District will need to commit to the hiring of a fulltime Director of Online Learning and support staff to accomplish the larger set of goals.

Future Plan

Hire fulltime Director of Online Learning this year.

Distance Education will need to expand and develop a more comprehensive curriculum and larger presence to meet the demand for online courses. To achieve this the DE program will need permanent fulltime staffing to achieve the program objectives.

Strategies/Resources

- *$10,000 for faculty training (annual allocation).*
- *$125,000 for fulltime Director of Online Learning*
- *$85,000 for a full-time Instructional Designer (annual allocation w/ benefits).*

4.0. Media Services

Media Services is responsible for District media equipment and services that are used in the process of transmitting content using sound, images, and light transmission technologies to groups of users. In addition, systems used in the creation of sound and/or image content are supported by the department. The department oversees the management of the District's media collection. Digital signage is an area requiring

support and one which needs to be explored fully before effective implementation will be possible.

4.1. Classroom Media Systems Replacement

Current Environment

There are 8,083 items of media equipment in the current inventory. This represents an increase of 640 items (8%) in the three years since the last plan in 2011. Even with this increase in quantity, the age of the equipment in use is getting older.

Equipment Age	*2011 Plan*	*2014 Plan*
Less than 5 years	36%	12.6%
5-10 years old	19%	37.6%
10-20 years old	22%	25.6%
20 Years and older	23%	24.1

In some areas of study, the conversion to digitally stored media is placing pressure to convert existing systems in order to maintain instructional effectiveness. There are other media technologies where a 7-10 year lifespan is completely acceptable. Distance Learning is regularly utilizing streaming technologies. It is expected that more support in the multimedia area will be required.

Future Plan

This established fund is for the ongoing replacement and upgrading of generic classroom media equipment and keeping this equipment current. This does not fund specialized equipment used within an individual discipline.

Strategies/Resources

Replace projection equipment on a five or six-year cycle and modernize rooms each year. Replace other supporting equipment as necessary.

- *2014-2015 $190,000*
- *2015-2016 $200,000*
- *2016-2017 $210,000*
- *2017-2018 $220,000*
- *2018-2019 $230,000*

4.2. Circulation Equipment Replacement

Current Environment

The department maintains a central collection of media systems (projectors, digital cameras, camcorders, PA Systems …) that are borrowed by District users for ocational individual departmental needs.

Future Plan

Commit an annual amount to the replacement of circulation equipment to keep it current and in good working order.

Strategies/Resources

Replace circulation equipment on a 3-5 year cycle.

- *$25,000 (annually)*

4.3. Locally Generated Content- Media Production and Distribution

Current Environment

The college produces many locally produced videos each year. This is used to support instruction, allow for increase communication with college governance and is used for public outreach. The cameras, audio production equipment and supporting editing hardware are used in this effort.

Future Plan

There is a need keep the production capabilities current. Some of the hardware is past its

Strategies/Resources

Each college site will have a content server available.

- *$100,000 replacement production hardware (one time)*
- *$50,000 content converters and creation hardware (one time)*
- *$35,000 .5 FTE Media Production Technician (annually)*

4.4. Media Collection Access and Format Conversion

Current Environment

The current physical collection is a blend of VHS and DVD titles. VHS is an obsolete format and DVD's are not the preferred way to access content. Faculty would be better served if they could access remotely from a central server

Future Plan

Where possible convert physical media to digitally stored and distributed content. Purchase streaming rights and hardware to offer the collection to authorized users of the instructional collection.

Strategies/Resources

- *$50,000 for streaming hardware.*
- *$200,000 for collection replacement*

4.5. Media Collection Accessibility

Current Environment

The College collection of recorded media content now exceeds 9,500 titles. The collections are housed in two locations with a courier service providing the transportation of shared items. Less than half of these titles comply with Section 508 accessibility standards.

Future Plan

The department has several collections still circulating. Captioning of existing titles is done only if it is needed by a DHH student. The central collection should be fully accessible.

Strategies/Resources

Hire staff to coordinate captioning needs and contract with captioning company

- *$36,150 .5 FTE Media Resources Specialist*
- *$48,000 caption service /(annually)*

4.6. Media Systems Repair & Maintenance

Current Environment

While the media services department has made inroads in implementation of new technologies within the District, The repair and installation processes need to be kept current in order to maintain the equipment. We have begun to acquire the necessary tools to maintain these newer technologies and must continue to fund test equipment.

Future Plan

Actively replace test and repair equipment to keep pace with newer technologies. Provide enough support staff to keep equipment in good working condition.

Strategies/Resources

- *$3,500 test & repair equipment (annually)*
- *$2,500 staff training (annually)*
- *$76,000 one FTE Media Systems Technician –Petaluma (annually)*
- *$76,000 one FTE Media Systems Technician –Santa Rosa (annually)*

4.7 Newman Video Conferencing Installation

Current Environment

In past years minor modifications were made to the auditorium that allow for lectures to be taped and transmitted via video conferencing to other sites. There is currently no ability for presenters to see remote sites.

Future Plan

This ongoing room conversion will provide equipment to outfit Newman Auditorium allowing it to become a room for video-based remote instruction and distribution of Districtwide events.

Strategies/Resources

- *$85,000 (one time)*

4.8 Group Video Conferencing Systems

Current Environment

There are eighteen spaces within the District that support small and large group video conferencing capabilities. These rooms serve some of the intercampus needs between Santa Rosa and Petaluma. Use of this technology allows participation of staff at multiple district locations in an environmentally friendly manner. No video conferencing is available at our Public Safety facility or Shone Farm. Many active use systems are over five years old

Future Plan

Provide equipment to outfit two additional conference room spaces to allow them to become video conference capable for College meeting locations. Building planning has been accomplished that will provide future space in the Bertolini Student Services building. However there is

a short term need to outfit one additional meeting room in Petaluma as well as adding the ability in Windsor to participate in video conferences.

Strategies/Resources

- *$80,000 (one time)*

4.9 Broadband RF Media Distribution System

Current Environment

The Santa Rosa, Petaluma campuses and Windsor center each have a bi-directional Broadband distribution system (Cable TV). These systems are used to transmit network television, satellite programs and locally generated programming within the District. The ability to transmit HD content requires new hardware. In Santa Rosa, some of the hardware is now past its useful life and needs to be updated.

Future Plan

Replace selected modulation equipment and add return signal equipment.

- *$3,500 - Replace return frequency modulator (one time)*
- *$1,900 Replace return frequency demodulator (one time)*
- *$25,000 Replace 12 channel modulators*

4.10 Digital Signage

Current Environment

As part of the planning process for many of the newer facilities in the District, infrastructure accommodations and equipment have been put in place for public display digital signage. As a temporary implementation, Media Services is currently manually loading PowerPoint presentations created by individual departments to serve as the content on the existing systems. This solution requires staff time for an area not directly determined to be a Media Services responsibility. There is no ability to implement Districtwide marketing messages or potentially "push out" emergency information.

Future Plan

The college should form a working group to investigate the potential implementation of this technology.

Strategies/Resources

- *Determine appropriate college personnel to serve on workgroup*
- *$20,000 replacement hardware.*

- *Commitment of college staff to investigate this technology*

4.11 Satellite Downlink

Current Environment

When move to Doyle Library was made the existing Plover satellite yard went off-line awaiting new connections to new building.

Future Plan

Using Fiber connections designed as part of Doyle and Plover projects establish satellite signals to Campus TV headend.

Strategies/Resources

- *$50,000 one-time for contractor work and equipment,*
- *Commitment of college staff to implement this technology.*

5.0. District Accessibility

Current Environment

The Disability Resources Department (DRD) provides students with disabilities equal access to community college education through assistive technology, ergonomic and assistive hardware, specialized instruction, disability-related support services, and advocacy. In addition, DRD faculty and staff participate in the District's ADA and 508 plans via the District Accessibility Committee and the Distance Education Accessibility Committee.

- **Santa Rosa**
  The Assistive Technology Center (ATC) on the Santa Rosa campus, is located in Pioneer Hall, and has ten fully accessible computer workstations.

- **Petaluma**
  The Assistive Technology Center (ATC) on the Petaluma Campus, is located in Jacobs Hall and has four fully accessible computer workstations located in the DRD Suite.

- **District Access Stations**
  Currently there are 87 access stations on the Santa Rosa campus and 24 access stations on the Petaluma campus available in the ATC, instructional computer labs, classrooms and libraries for student use. Additionally, there are three portable CCTVs for District use and one stationary CCTV in each of the campus libraries for low vision students. There are 3 Ubi Duos for deaf students to communicate with staff. They are located in the Disability Resources offices on both campuses and one in A&R on the Santa Rosa Campus.

Future Plan

The following is a compilation of foreseeable disability-related technology needs based on current enrollment trends as well as state and federally mandated compliance regulations.

- Replace access station computers across the District with a single model CPU with sufficient memory and RAM to run the accessibility software simultaneously with other District and academic related software.
- The purchase of additional accessibility stations where there has been growth in public access stations (testing, A&R, CyBear Center, etc.) as well as computer classrooms and labs.
- Increased number of access station software licenses to assure compliance as the number of access stations increases across the District. Explore

concurrent use and site license options to increase accessibility compliance.

- Reduce the number of images required to maintain access stations across the District. Alternatively, move the accessibility software to the District's server so that access to software is not limited to physical access stations, but universally available, thus, truly providing equal access.
- Continued compliance with Section 504/ADA with regard to its "5%" accessible workstations in all computer labs on both campuses. SRJC strives to provide "10%," when possible especially due to our increasing population of students with disabilities as well as age-related disabilities that are increasingly affecting our Sonoma County population.
- Explore feeding textbook information directly into the electronic Alternate Media Request Form from the Bookstore Database.
- Replace the Assistive Technology Center student computers on both the Petaluma and Santa Rosa campuses. Each station is over 7 years old, and the warranties are expired. Immediate replacement of all 14 computer stations is needed to maintain access for students with disabilities.
- Installation of swipe card readers at all Student Kiosk (Log In) stations, including SARSTrak and Timekeeper stations, to support accessibility for students with disabilities accessing support services throughout the District. In addition the swipe card readers will ensure that students' confidential student id numbers will not be compromised by sharing information with someone else.
- Stay current with technological advances.

Strategies/Resources

- In order to formally integrate accessibility into the District the funding must come from the same funding sources used for the various technologies across the District. EXAMPLE: CCTVs are included in the Instructional Equipment Budget.
- Estimated cost for replacement of ATC computers ~ $20,000
- Continued support from IT for access station software installation on lab computers and on the servers.

6.0. Student Services

Information Technology Vision

Student Services (SS) wants to be an active collaborator in the District's efforts to provide students with the best and most appropriate technology available to support their learning and success. We realize that our technology applications and resources will need to evolve to meet the changing demands of students and staff. Student Services personnel will

also need access to technology that most efficiently delivers support and services to students. In addition to providing better recruitment and retention strategies for students, this will serve to enhance staff performance, satisfaction and professional development. In order to carry out the vision of the District's 2014 Strategic Plan, Student Services will need to align appropriate technologies with IT support, staff training and the financial resources to deliver student success.

The vision of SS tech needs and plans will need to strongly consider the Student Success & Support Program (SSSP) data collection and reporting guidelines. The vision will also need to be congruent with the college's new strategic plan including vision, mission and goals. Finally, SS will need to be strategic in our vision so that future bond funding can be used to support SS strategic technology goals/activities.

6.1. Student Services Equipment

Current Environment

Student Services has over 350 PCs and Macs assigned to its various departments in both Santa Rosa and Petaluma and also the Southwest Center. Student Services provides support, counseling, student development activities, advising, enrollment services and technical record-keeping services, (including delivery and storage) for SRJC students.

Future Plans

Student success and retention has come into the spotlight with the Student Success Act of 2012. The implementation of the new mandates include the Student Success and Support Program with the focus on student support services delivery in orientation, assessment, counseling and advising for student educational planning, and follow-up services. These services need to be integrated with all other student support services provided throughout the District. There will be greater needs for technology support to help service integration and coordination in order to deliver the support to students more effectively and efficiently. The District will also need to invest in current technologies to communicate with and deliver these services to students.

In addition to service delivery, there will also be more rigorous requirements at the State level for service data collection and reporting. The District needs to review current practices and invest in technology support that will ensure compliance to state guidelines.

Student Services will continue to monitor computer and printer inventory so that replacements and upgrades happen on a 7-year cycle.

Strategies & Resources

Student Services will continue to advocate for the integration of appropriate hardware and software applications throughout its diverse programs, services and activities. The priority will be technology that supports the access, engagement, retention and success of our students throughout the District.

It is estimated that Student Services will need 150 new or replacement computer systems over the next three years.

6.1.1. Support the Development of Technology Applications for Student Services

Current Environment

Currently, students and staff have access to numerous Student Services applications, documents and information through the college's digital information system. This is a combination of both personal and public online information. Student Services is committed to encouraging student responsibility and success through technology. Student Services will continue to strive for 100% accessibility, and where appropriate, parity in both our online and in-person information.

Future Plans

Continue to explore, develop and evaluate the best practices for Student Services in providing technology applications to support student access, engagement, retention and success. This baseline suite of student support systems and services should be available to District staff and to all students where appropriate. It should include:

- Online systems that give students access to District administration, faculty, classes, and learning resource centers, in compliance with the requirements for accessibility identified by the Office for Civil Rights and other federal and state regulations;
- Degree Audit System: Expand Degree Audit to include functions using Assist.org and other "Sherpa" like functions that will enable students to explore degree and career options as well as monitoring and tracking their completion status.
- Smart Card/Reader system at all student services departments and academic departments that provide student support services.
- Online support (CCC Confer, etc.)
- District-wide wireless access
- Portal-based communication (MyCubby, etc.)

- Current technology for communicating with both prospective and enrolled students, including CRM tools, social media applications, texting services, etc.
- New SIS ERP software system that allows for greater functionality for Student Services departments, including applications for student access, engagement, retention and completion.
- Online counseling, advising, and other critical support services
- Electronic transcript exchange
- Event management software that supports the events and activities of both internal departments and external users of our facilities.
- It is important to note that at this time, parts of the Student Information System (SIS) do not deliver service efficiently, nor do they support the efficient use of staff time. Although some enhancements came with SIS, some functionality was lost and there is no current plan or timeline to recoup that functionality.

Strategies and Resources

It is estimated that software development and acquisition would cost anywhere from $100,000 to $25,000,000.

6.1.2. District-Wide Computer Access Stations

Current Environment

SRJC's public kiosks and access stations continue to be a primary method of delivering information to on-campus students. At this time, students can receive up-to-date information such as important registration dates. Students can also access their own personal District records, file a college application for enrollment, register for classes, check email, and surf the web for important educational information. There are presently approximately 45 access stations at strategic locations on the Petaluma and Santa Rosa campuses.

Future Plan

Student Services will continue evaluating optimal quantity and locations for access stations.

Strategies and Resources

IT will be consulted to ensure reliable access station connectivity.

Estimated cost for new and replacement technology over the next 3 years is ~$20,000.

6.1.3. Support Software Upgrade & Maintenance Costs

Current Environment

Presently, Student Services has approximately 16 software packages that require annual maintenance:

- Three (3) in the Career Center: Career Cruising ($850), categorically funded; EUREKA ($1,900), categorically funded; College Central Network – Job Board & Virtual Career Center ($1,300), District funded **(Total = $4,050)**
- Four (4) in Student Success and Assessment: Student Right To Know ($1,300), COMPASS ($28,000), California Test English Placement (CTEP) ($3,300), SARS ALRT ($1,500). All categorically funded (**Total = $34,100**)
- Four (4) in Counseling: SARS Grid ($2,700), and SARS MSG (2,200), Twilio Service ($2,000), SARS TRAK ($1,500). All categorically funded (**TOTAL = $8,400**)
- Three (3) in A&R: Constant Contact ($3,330), 1/3 categorically funded & 2/3 District funded; College Source ($15,000), categorically funded; ImageSource/ATI Filer ($5,550), categorically funded. (**Total = $23,878 per year**)
- One (1) in Financial Aid: Regent FAM, (**$30,000**), District funded
- One (1) in Student Health Services: MediCat, (**$13,000**), categorically funded
- One (1) in Student Affairs: Constant Contact, **($3,200)**, funded by ITG

Future Plan

Continue to integrate the current system of institutionally developed and maintained software and vendor supported software applications. This hybrid approach should be developed to offer a seamless delivery system that addresses the needs of our diverse student population and allows staff user-friendliness, speed and multi-dimensional access.

Strategies and Resources:

Annual maintenance costs: ~$115,000. See section above for funding sources.

6.2. Admissions, Records & Enrollment Development

Current Environment

The Admissions, Records & Enrollment Development (ARED) offices are located on both the Santa Rosa and Petaluma Campuses. The Santa Rosa Campus office is located in Plover Hall. The Petaluma Campus office is located on the first floor of Jacobs Hall. ARED services provide critical

support for the matriculation and instructional goals of District students including admission to the college, registration, residency determination, official transcripts, awarding of degrees and certificates, transcript evaluation, international student admissions, and enrollment and degree verifications.

On the Santa Rosa Campus, there are currently 34 personal computers located in the office and one personal computer located at the Information Desk. There are also 10 laser printer and 3 multifunction printer/faxes, and one color laser printer, which are vital in printing official college transcripts, student certificates, diplomas and international student newsletters. In addition, there are 14 kiosks located in the lobby area. There is one Kyocera copy machine in the office. There are also eight document imaging scanners. ARED is responsible for the imaging of all student records for District-wide accessibility to counselors and other college staff.

On the Petaluma Campus, there are currently nine personal computers, five laser printers and one document imaging scanner located in the ARED office. There are five kiosks located in the lobby, each equipped with a desktop PC and a laser printer. There is also one copy/fax machine located in the office.

In November 2008, the District embarked on a major Student Information System (SIS) conversion. Six years later, the SIS implementation is still not complete and continues to challenge ARED staff due to lost functionality and ongoing glitches. Although the SIS conversion has provided students with more access and automation in applying to the college and registering for classes via the student portal, and the faculty portal provides faculty more online automation in regards to their class rosters and submitting their grades, unfortunately there has not been enough automation progress in the records areas of ARED.

The lack of a complete Degree Audit program has impacted the evaluations staff as each degree and certificate evaluation must be done entirely by hand.

- The loss of the automation in recording repeat codes at the end of each semester has created hours of manual processing for the records staff.
- In summary, particularly in the records area, SIS does not deliver service efficiently, nor does it support the efficient use of staff time.

Future Plans

- Further development and enhancement of the Degree Audit system. The current version is a homegrown program and given that the current SIS is also homegrown, a new off-the-shelf Degree Audit package is unlikely.

Therefore, IT will need to continue developing and enhancing the current homegrown package. With the new requirements of the Student Success Act this will need to become a high priority for the District in order to have resources directed at this much-needed project. Recently, ARED staff funds were re-allocated to the funding of a new dedicated programmer to work on specific ARED and Financial Aid programming needs. This new position will support the enhancement and implementation of Phase 2 of the current Degree Audit program which will include student transfer work. The programmer will also work collaboratively with the evaluation team to automate functionality in the evaluation of transfer coursework, degree and certificate processing. This automation is needed in order to provide current and accurate student records information to counselors who are developing the mandated Student Success education plans for students. Academic Affairs and Student Services see this as a needed tool in order to increase the number of degrees and certificates awarded to students. Students would also greatly benefit from an automated education planning and degree tracking tool.

- Continued development of the electronic submission of college forms into the student records system (SIS) (e.g. petitions, requests for transcripts, etc.). Currently, students are able to complete these forms online, but they must print some of them out and then submit manually to ARED. Some forms are now submitted online using Sharepoint, however this is not the most efficient process. A forms submission similar to how applications are electronically submitted is needed to better serve students and streamline the workloads of staff in ARED.

- Purchase of multiple Google-Chrome laptops for mobile outreach. As the College continues to reach out into the community to increase enrollments, there is a need for portable, lightweight laptops that will provide dependable and efficient access to the online application for students and access to SIS for college outreach staff to process off-site registrations. ARED recently purchased two Google-Chrome laptops to test, and it is planned that at least eight more are needed to meet the various outreach needs for the entire District to utilize.

- Development of a non-credit online application for admission. Since fall, 2009 nearly all student applications for admission have been completed online via CCCApply. Currently, both credit and non-credit students complete the same application. However, the online application has proven to be too difficult for the non-credit Older Adult Program and the ESL population of students due to length and content of questions, and may be a barrier to enrollment. Therefore, ARED is investigating the feasibility of implementing a homegrown non-credit online application

that is more appropriate for non-credit enrollment and meets state and federal reporting criteria for non-credit. The application would have both English and Spanish versions.

Strategies and Resources

The continued enhancement and development of the Degree Audit system is vital. The project will continue to involve and require the collaboration of IT and ARED staff. ARED staff funds were recently allocated to fund the new ARED dedicated programmer. This re-allocation created a new IT programmer position and eliminated an ARED Specialist position, however the outcome will better meet the needs of the entire District and students due to the ability to enhance and automate services to students and staff.

6.3. Student Success & Retention/Assessment Services

Current Environment

The Assessment/GED Services Centers are located in Plover Hall at the Santa Rosa Campus, in the Jacobs Hall Building at the Petaluma Campus, and in the Student Services Office at the Southwest Santa Rosa Center. The services offered through the Assessment Program are Placement Testing for English, math and ESL (English as a Second Language), for credit programs, and writing sample for non-credit ESL program, the GED (General Education Diploma) computerized testing, Chemistry Diagnostic tests, and finally Distance Learning Proctoring Services. All Distance Learning Exams are completed online. In Plover Hall, the Assessment Center has 7 workstations for the Dean and support staff. Each workstation has a computer and there are a total of 6 printers for the entire center. There is also an additional computer and scanner, which are used exclusively for processing placement test Scantron forms. The scanning software is operated with Windows XP which will no longer be supported. The District needs to find a solution to upgrade scanning software at all campuses and sites.

Within the Center at the Santa Rosa Campus there are 2 testing labs equipped with 11 and 48, respectively, used computers and monitors with hydraulic arms that fit neatly back into the desks for paper and pencil tests. Each room is equipped with media technology and one instructor workstation. These computers are currently used to administer the newly implemented Mathematics (COMPASS) placement test, Distance Learning Exams, the ACE (Intermediate Algebra Competency Exam) and the English as a Second Language (ESL-COMPASS) placement test. The computers are also used for GED testing beginning January 2014.

At the Petaluma Campus there is an additional Assessment Services office located in Jacobs Hall Building. The office is equipped with 1 desktop computer and 1 laptop and a printer. An additional computer located at the Assessment staff office is also utilized for the scanning of placement test Scantrons. Placement testing and the proctoring of Distance Learning Exams are administered in the designated testing room for placement testing at the Petaluma Campus, Jacobs Hall Room 128. The designated testing room is equipped with 24 used computers and monitors with hydraulic arms that fit neatly back into the desks for paper and pencil tests. The room is equipped with media technology and an instructor's workstation. Much like the Santa Rosa testing center, these computers are currently used to administer the Mathematics (COMPASS) placement and GED test, Distance Learning Exams, and English as a Second Language (ESL-COMPASS) placement test. To comply with computer-based GED testing requirements, Jacobs Hall Room 127 is set up with computer and required software as a location to check-in candidates and monitor room 128.

In the Student Services Office at the Southwest Santa Rosa Center, Registration, Assessment, Enrollment, Orientation, Counseling and Preregistration services are provided. These services are designed to place students into noncredit ESL courses. The office is equipped with 4 workstations with a computer and printer. There are a total of 4 computers, 4 printers and 1 scanner. Three of the workstations are set to help students with Registration and Enrollment services, and 1 station is used by an academic counselor to assist students with career and educational goals. The office is equipped with 2 kiosks in the lobby (each with a computer), which are used by students to complete admission applications and to register for classes. A scanner has been installed at one of the staff workstations for processing placement test Scantrons.

The Southwest Santa Rosa Center also has a computer lab equipped with 25 computers that are used by students who are taking classes there. Matriculation staff use the lab to provide program orientation to students (students learn how to apply online, register for classes, etc.) and the lab is used by students during open registration week.

Future Plans

Assessment is working with the English department and IT to implement computerized English placement testing.

Due to the transition to computerized testing, the technology needs will become greater and the need for the maintenance and repair of the computers and scanners will be substantially increased for the Assessment Services Centers. The small testing room (Plover 535) needs an additional computer/monitor system to reach full capacity.

Additional computerized testing facilities are needed for all disciplines. Currently, Plover room 558 is being considered to update infrastructure to accommodate 40 computers and hide-away desks with ADA compliance estimated cost is $75,000.

Assessment Services will also require programming changes to the assessment database in order to ensure test security of digital information and efficient testing delivery management (use of NetSchool). In addition, federal law and Chancellor Office directives require that technology is universally accessible to all persons, including those with disabilities.

The current placement re-take policies and procedures are being reviewed and revised to ensure compliance with regulation and foster student success. Once the policies and procedures are approved, there will be associated programming needs to enforce district policies. The cost of programming is unknown.

Common assessment tools for English, Mathematics, and ESL are being designed at the state level as part of the SSSP implementation. Once these tools are released, the District is required to adopt these assessment tools in order to receive Student Success and Support Program funding, and will require IT support to accommodate the changes. The potential cost is not yet clear.

The current Petaluma Testing Center location is cumbersome for students and staff. It is not optimal for providing assessment services as well as integrating assessment into other key student services functions at Petaluma. To increase assessment service efficiency, the testing location needs to be relocated to be adjacent to other service areas and staff. The testing room capacity will be 35 seats instead of the current 24.

Strategies and Resources

- Annual departmental software maintenance costs are about $34,000.
- Computer replacement costs for the existing computers at Santa Rosa and Petaluma testing centers (86 in total for testing delivery) is about $90,000.
- Cost of common assessment implementation is unknown.
- Total cost of integrated Student Success software/hardware for all Student Services, including an advanced intervention/follow-up services tool, a Smart Card/Reader system, an automated education planning and degree audit/tracking tool is estimated at $3,000,000.
- Petaluma testing center relocation is about $30,000.

6.4. Counseling & Support Services

Current Environment

The Counseling department has 62 computers (7 laptops) and 38 printers for its counselors, support staff and student use, including the Petaluma Campus and Schools Relations. The technology demands have increased since the writing of the last Technology Master Plan. Areas of programmatic growth have occurred in online counseling and orientation, the storage and retrieval of resource information for both students and counselors, the integration of the SARS appointment system with the Matriculation data reporting system, and the need to provide access for students to an increasing array of internet-based services. Additionally there has been greater coordination between the different Student Services departments than in the past.

In an effort to provide consistent and accurate information to students, and to encourage group counseling initiatives, the Counseling Department has been active in the development of media-based presentations for use both on and off campus. These initiatives have required the purchase of additional equipment.

Future Plans

- Provide regular technology training for classified staff.
- The department will need IT support to continuously improve the delivery of orientation services and educational planning tools.
- Student Services will continue to monitor computer and printer inventory so that replacements and upgrades happen in a 7-year cycle.
- Request 4 (four) new laptops to be used in the Santa Rosa Welcome Center (Student Activities Center); and 3 (three) new laptops to be used in the Petaluma Welcome Center. These laptops will also be used for future Educational Planning Fairs on both campuses.
- The addition of new counseling positions to meet the SSSP mandates will require the need for new computers and printers for every counselor; approximately 5 net new.
- Expand Degree Audit to include functions using Assist.org and other “Sherpa” like functions.
- Development of the Early Connect Program for early intervention when students are experiencing problems in the class will require monitoring of follow-up services.

Strategies and Resources

- It is estimated that the cost of new and replacement technology hardware will cost ~$24,000. (Estimated cost of 8 new systems is $8000.)
- Purchase another laptop to meet the needs of counselors who travel to off campus sites (Shone Farm, Public Safety) to serve students, approximately $1,000.
- Add 7 (seven) laptops to Counseling inventory to be used at both campus Welcome Centers ~$7,000.
- Improving the delivery of orientation services may cost $50,000.
- Software upgrades and maintenance costs: ~$25,000.
- Purchase the following for use with campus in reach and workshops:
    - 3 iPad Airs with keyboards and cases ~$2,000.
    - 3 Kensington locks for security ~$300.

6.5. Student Financial Services

Current Environment

Student Financial Services has a total of 35 PCs and 9 student kiosks (7 Santa Rosa, 2 Petaluma). Two networked printers support Financial Aid, 1 supports Scholarship, 1 supports Veterans Affairs with 7 desktop printers in SFS for special usage. The Regent FAM financial aid processing software runs on 2 servers in Information Technology, one for the database and one for the application. SRJC's Financial Aid system also communicates electronically with the federal Department of Education. The Department of Education last published minimum standards in 2009 and updates these every 4-5 years. Regent FAM provides basic aid delivery on SRJC's new Windows-based platform. Student service standards support the need for web-based student inquiry through myCubby and the California Student Aid Commission has developed Web Grants, a soon-to-be required Cal Grant electronic data exchange. FAM updates and database support are provided by various members of the IT department: updates by the Network Technicians, database changes by the Programmer Analyst, Senior, backups and corrections by the Network Technician, etc. Each year there are significant changes to federal financial aid regulations, and there continues to be challenges to meet the growing and changing workload. Work with Regent Enterprises and SRJC's IT Department to further develop functionality and interfaces for FAM continues to be a high need for the Financial Aid department, to speed up slow processing, communicate better with students and to support student success as a result

The Foundation Scholarship payment program (Moneybags) is SIS-compatible and linked to Accounting's Escape system. Foundation Scholarship application processing is now fully within SIS and is updated as needed. The new on-line Foundation application in SIS was piloted

spring 2013. The web-based Scholarship on-line bulletin board in SIS is working well. These enhancements have helped with growing workload in the Scholarship Office as the Foundation, Business & Community scholarship programs are growing, and the Doyle Scholarship program has returned (at a smaller level than it was before).

The Veterans Affairs office makes extensive use of student lookup in SIS, transcript lookup and SARS (for counseling appointments). In addition, two PCs in this office must maintain compatibility with the Department of Veterans Affairs (VA Once) to certify GI Bill recipient enrollments. Recent MIS reporting changes (optional summer 2011, mandatory summer 2012) requires student Veteran identification and tracking in SIS. In addition, as we move to a service model of providing a Veterans Resource Center, grant applications will be submitted and donations will be solicited. Detailed data on whom our student Veterans are, and how they are doing, will be needed for these efforts.

Future Plans

- Maintain minimum PC standards as directed by the federal Department of Education and Veterans Administration; replace/upgrade as needed.
- Develop/launch Regent FAM functionality for student web inquiry, State Grant interface (for WebGrants).
- Implement CCCBOG and interface with FAM and SIS.
- Online Doyle Scholarship application submission, with electronic transcripts from high schools, and would require programming and testing.
- MIS programming for student Veterans identification and tracking is required.
- A Scholarship contact and award detail management database is needed to support the growing Business & Community scholarship program.
- All items listed above will be functional District-wide.

Strategies and Resources

- Approximate costs for upgrades: covered in part by categorical funds [e.g. Board Financial Aid Programs (BFAP/SFAA) replacing 8 per year costs $16,000.]
- Cost of Regent FAM enhancements and some local programming, covered in part by BFAP/SFAA funding if Chancellor's Office approval is secured.
- Cost of CCCBOG program to be covered by BFAP funds.
- Cost of online Doyle scholarship application submission projects would be programmer costs and time.
- Cost of Veterans data programming will be programmer costs and time.

6.6. EOPS/CARE

Current Environment

All workstations in the Extended Opportunity Programs & Services (EOPS) Office in the Bertolini Student Center (13 PCs, including 2 kiosks) at the Santa Rosa Campus and in the EOPS counselor's office at the Petaluma Campus (1 PC) are dependent upon computer technology to provide effective and efficient services to EOPS/CARE students.

Except for the students contacted by the EOPS Outreach Specialist, all EOPS/CARE student tracking is done through the 9 EOPS/CARE screens in the Student Records System (SIS), created and maintained by Information Technology Department. These screens were converted from the Legacy System on November 12, 2008.

In addition, the EOPS and CARE programs use "lookup only" links to assessment, registration, counseling, matriculation, articulation, and financial aid databases.

EOPS and CARE funding is dependent upon accurate and timely reporting of term end program data to the Chancellor's Office through the Management Information System (MIS).

Future Plans

EOPS and CARE computers at the Santa Rosa and Petaluma campuses need to be updated to current technology according to the District's 7-year cycle. The latest request for computer upgrades was submitted through ITG in 2009 and reported in the Program Review and Planning Process (PRPP) for 2013.

There is still a need for 2 more computer stations in the EOPS lobby for student use (Rm. 4703). EOPS students on the Petaluma Campus also need one computer for student use. The EOPS Conference room in the Bertolini Student Center (Rm. 4703) needs all of the technology support available in a media-enhanced classroom.

As EOPS programs throughout the state move to a "paperless" system of tracking services to students, this may become a viable option for SRJC.

EOPS will continue outreach services to the English Language Learners (ELL) community throughout the District service area. This requires the appropriate technologies for digital access and multimedia presentations. The District laptop computer assigned to the EOPS Outreach Specialist needs to be upgraded to an iPad to facilitate presentations about EOPS and SRJC throughout the District Service Area.

The EOPS office would like a method of tracking students who have received assistance from the EOPS Outreach Specialist from the time they complete their SRJC applications in CCCAPPLY until they turn in their applications to EOPS. This request would probably include creating an EOPS Outreach screen in SIS and producing new outreach reports.

Strategies and Resources

Santa Rosa

The latest request for computer upgrades was submitted through ITG in March 2009 and updated in the Program Review and Planning Process (PRPP) for 2013. The large-screen VCR in the EOPS conference room at 1808 Albany was not moved into the Bertolini Student Center and the bond funds ran out before the technology planned for the new conference room was purchased. As a result, the EOPS office is without the capacity to play DVD and other types of media in the EOPS conference room (est. cost is ~$10,000).

Petaluma

A joint EOPS/Puente project at the Petaluma Campus created a student reception and study room located in close proximity to the offices of the Puente counselor and the EOPS counselor. This room will need a computer workstation including a printer (est. cost is ~$1,600).

6.7. Student Health Services

Current Environment

In addition to standard network connections to the College's Outlook, Escape and Student Information (SIS) systems, the Student Health Services department also utilizes a secured intranet and software system (MediCat) specific for healthcare information processing, including a secure electronic medical records system. A dedicated server for MediCat is housed in Information Technology (IT). All permanent employees, contractors, student workers and psychology interns utilize the system for appointment management, to document student visits and services rendered, tracking for clinical case management purposes, and to access internal reporting, analysis and program evaluation functions. The software system interfaces with the College's student database, and via a regular schedule of uploads, demographic student information populates selected fields.

At the beginning of 2014, 45 separate users shared the department's 34 desktop computers and 5 laptops, located in three different facilities on two campuses. The current District policy is to replace hardware every 7 years, averaging to about 6-7 computers each year. The Medicat server also requires replacement periodically.

Technology challenges exist to link our staff and facilities effectively to conduct needed meetings and dialogue that are inclusive. Several pilots/options are being tested.

Future Plans

- Evaluate and adjust appropriately technology solutions in the health centers on the Petaluma and Santa Rosa campuses to best support providers/staff and the clinical practice towards a) ergonomic integrity b) most effective charting/documentation methods, c) optimum communicable disease control d) other enhancements as new technologies emerge.
- Expand the existing MediCat software to include Self Check-In functions that have students complete their initial history, allergies, and medications and symptoms online before their appointment, assure adequate facilities to support confidentiality while students use this on-site, and adequate funding for additional hardware needs.
- Expand the existing MediCat software as needed to add functions that allow students to have secured email communication with clinicians that includes protected health information. (Online Student Health). This software module also enables students to book appointments for themselves in the health centers online during off hours.
- Explore and implement (as feasible) options to provide access to Student Health Services' records system from off-campus locations by providers. (Support MD consultation process and SRJC's Sports Medicine program are specific functions identified as necessary for clinical quality assurance).
- Explore and identify multimedia / tech methods to establish secured / confidential connections between our campus sites for both planned department meetings, but also to support urgent clinical consultations with students/providers to increase access to services and reduce risk.
- Explore capacity to develop a more efficient hardware plan for SHS utilizing a centralized hardware hub/dedicated server, with networked workstations, to reduce the expense and overhead costs of maintaining 34 full computer workstations.
- Identify best methodology and implement tech enhancements as needed, to support increased online health educational engagement by SRJC students through Student Health Services' access points, including a broader selection of video materials/products and learning resources.
- Upgrade SHS web site, and explore the use of applications specific to mobile devices to support student health.

Strategies and Resources

- Assure adequate hardware and software resources (including media) are on site to support specialized healthcare operations, with the highest standard of medical confidentiality for students.
    - Re-engineer hardware and software plan to maximize resources and efficiencies.
    - Replacement of workstation hardware, and software updates implemented in a timely manner.
- Reconfigure Race Exam Room work stations for improved ergonomic environment for staff.
- Work with MediCat software consultants, Information Technology, and ITG to purchase and implement software upgrades and new modules; cost is approximately $13,000 per year.
- Assure appropriately trained personnel are on site to maintain and develop an increasingly complex database within Student Health.
- Purchase Conduct Manager software from Maxient: approximately $14,000 for the first year and $9,000 each year after.
- Maintain ongoing access to needed technology resources for all department workers and provide ongoing staff development activities specifically addressing technology changes.
- Continue software maintenance agreements and plan for increases in costs due to software and hardware expansions.
- Budget/Financial Strategies
    - Health Fee revenue – work with the Health Services Advisory Committee to assist in determining priorities within the budget development process given the available amount of Health Fee revenue on an annual basis (including use of Reserve Fund)
    - Research and scan for external funding sources for IT hardware, software, training, and personnel support to offset expenses to a vulnerable Health Fee fund, i.e. grants, government funding options, and District fund/Bond monies as available.
    - Through careful planning, maximize cost effectiveness of chosen technology applications to minimize negative impact on budget longitudinally.

6.8. Student Affairs & New Student Programs

Current Environment

Student Affairs & New Student Programs (SA&NSP) includes many diverse programs and services for students located on both the Santa Rosa and Petaluma Campuses. The Student Affairs area includes all of student life for both campuses, including leadership development and student activities. The Student Affairs Office delivers support, guidance, advice and information to the students of SRJC. These services include the Center for Student Leadership training program, the Associated Students, the Off-Campus Housing program, the CyBear Copy Center, the Student ID card

service, and campus event management. The New Student Programs area includes the Tours program, the Welcome Centers, orientation events and activities, and other transitional support services.

At the beginning of 2014, approximately 50 separate users shared the department's 29 PCs and 3 Macs that deliver a combination of staff and student support on the Santa Rosa Campus, Student Affairs area; this includes the CyBear Center/ID operation. On the Petaluma Campus there are 3 PCs, including the CyBear Center/ID laptop.

Future Plan

Student Affairs will continue to develop new and more efficient ways to deliver information through technology with the support of the IT Department. Our goal is to make all of our services currently available in-person, also available online. It will also be imperative that we learn more effective ways to communicate with our technology-savvy students including social networking and other technologies. It will also be important that Student Affairs continue to improve and manage its websites to communicate effectively with today's college student.

Continued maintenance and upgrade of the Off-Campus Housing database and website by Information Technology staff is a priority.

As the student copy resource center, including computer access, the CyBear Center will continue to maintain and upgrade technology resources with the support of District technology funds. The student/staff photo ID system will need to be maintained and upgraded with support from Information Technology and District funds.

The Student Affairs Office will continue to research and advocate for the use of Smart Technology in the student/staff ID cards. This technology will allow students to use their ID cards as a debit card as well as photo ID and library/computer lab usage. The cost of this endeavor is still being determined. Smart Card technology will apply to both campuses and all District sites. This card will be used to track student attendance and retention at education planning workshops, student engagement programs and other appropriate events and activities.

Students currently are able to receive both a hard copy and electronic transcript of all courses taken at SRJC. In order to provide a parallel record of all student extra- and co-curricular activities, events and trainings, the Student Affairs Office would like to work with Information Technology to develop an online Co-Curricular Transcript using a secure SQL server database. This would apply to students on both campuses and all District sites.

The Student Affairs Office would like to be able to assist the Theatre Arts Department and the Athletic Department with ticket sales. This would also assist students as it would make the process easier by not limiting service to our hours of operation. This may require our office to have ticketing software similar to Theatre Arts.

Comprehensive Event Management software so that both small and large events can be managed online using a single interface accessible by multiple departments responsible for planning and implementing events. This should save both staff time and paper products. Currently, there is a cross-component task force researching the best tool for the District. It will also include ticketing systems for Facilities Operations and Media Services.

Development of a faculty portal based system that allows for reporting of academic dishonesty incidents; these reports will be posted in SIS and allow for more efficient adjudication and tracking by administrators responsible for Academic integrity. This project is nearly finished with expected launch to be May 1, 2014.

Development of a student complaint and grievance online filing and tracking system similar to Academic Integrity above. This would allow all complaint and grievance forms to be routed for decisions and signatures within SIS or other appropriate software.

In order to maximize the effectiveness of District outreach services, a student-tracking database and software module needs to be implemented. The purpose of this module is to automate and centralize “prospective students” in a common database so that individual departments can send information or follow-up communications based on student profile elements in the database. Though aspects of this service exist in the current CCCApply system, it could be further developed for greater functionality.

Upgrade the current Center for Student Leadership room (4643 Bertolini) and the 2nd floor Conference Room (4733) to include videoconferencing.

Purchase digital video display sign on Sonoma Mountain Parkway to advertise Petaluma Campus events and activities ~$80,000.

For Petaluma Campus: need a portable event stage with lighting and sound system, with permanent power. This would be located between the cafe and the bookstore and would provide a place for campus presentations and outdoor activities ~$120,000.

In the “dream big” category, the Associated Students are proposing:

- A Multicultural Multimedia Center;
- software that allows student leaders to have access to their account information in real time including A.S. accounts and club trust accounts;
- software that allows the A.S. and clubs to accept and track donations;
- Development of Student portal application that includes student engagement calendars, announcements, opportunities, etc.
- SRJC AS App for navigating campus, receiving updates etc.

Strategies and Resource

- The estimated cost of software and hardware needed over the next three years is ~$35,000.
- The estimated cost of hardware for encoding and reading "Smart" cards is $4,000.
- The estimated cost of creating and implementing a Co-Curricular Transcript software suite is unknown requiring mainly IT staff resources.
- The estimated cost of purchasing and maintaining an Events Management software package is $40,000-60,000 (funded by Business Services).
- The estimated cost of adding videoconferencing to Bertolini Student Center, Rm. 4643 is ~$25,000.
- The estimated cost of adding videoconferencing to Bertolini Student Center, Rm. 4733 is ~$25,000.
- The estimated cost of upgrading current Off-Campus Housing web site is unknown ~$6,000.
- The estimated cost of outdoor video display on the Petaluma Campus is ~$80,000.
- The estimated cost of a portable event stage with lighting/sound for the Petaluma Campus is $120,000.

6.9. Disability Resources Department

Current Environment

DRD Department the Disability Resources Department (DRD) is located on both the Santa Rosa and Petaluma campuses. The DRD department provides disability intake and accommodation services for students on the 3rd floor in the Bertolini Student Center, and access to DRD student programs in Pioneer Hall. Over 30 faculty and staff utilize Desk top Computers, Inkjet printers, File Maker Pro software, SARS software, Microsoft Office software, Adobe Creative Suite software and SIS. In addition two laptops are available for staff use throughout the district and in the local community. 2 Kyocera printers are located on the Santa Rosa campus, one in Bertolini, on the 3rd floor, and one in Pioneer Hall. The DRD department has two SARS kiosk stations, one located in Pioneer

Hall and one located in Bertolini on the 3rd floor. There is one Timekeeper log in station located in Pioneer Hall. DRD students requiring accommodations in the classroom, have access to check out the following technologies: 50 Digital Recorders, 20 Tape Recorders, MP3 players, and 4 Assistive Listening Devices.

The DRD suite located in Jacobs Hall on the Petaluma campus provides disability intake, testing, and assistive technology services to DRD students. 5 faculty and staff members utilize Desktop computers, Inkjet printers, File Maker Pro software, SARS software, Microsoft Office software, Adobe Creative Suite software and SIS. There is one SARS kiosk station and one Timekeeper log in station on the Petaluma Campus.

- Specialized Instruction the Disability Resources Department provides specialized instruction in a variety of classroom locations on both the Santa Rosa and Petaluma campuses. "Smart" classrooms are now not only requested by all teaching DRD faculty, but are necessary for the implementation of specialized instruction curriculum.
- DRD Student Support Services: DRD Support Services provides accommodations for students taking course and placement exams, coordinate note taking and mobility assistant accommodations, and oversee accessible furniture requests for the District. The DRD support services are currently located in Analy Village on the Santa Rosa campus and Jacobs Hall on the Petaluma Campus. There are currently 10 accessible student testing stations available on the Santa Rosa campus, and 3 accessible student testing stations on the Petaluma campus. Each accessible student testing station includes a Dell Desktop 745 with Assistive Technology software and Assessment software installed. In addition there is one CCTV available on both campuses, in the testing center for students to utilize during exams.

Future Plan

The following is a compilation of foreseeable disability-related technology needs based on current enrollment trends as well as state and federally mandated compliance regulations.

DRD Department the technology demands have increased since the last Technology Master Plan. With the implementation of the Student Success Act, programmatic growth in online orientation, electronic assessment, and online disability accommodation service delivery are anticipated. Students increased usage of internet based services, via mobile devices has forced the department to reorganize their efforts to deliver essential student services in a timely manner. To facilitate efficiency in serving

students and to support sustainability in the work environment Disability Specialists require:

- 14 iPad Airs
- 14 iPad Air cases with attached keyboards,
- 14 height adjustable ergonomic desks for staff, to accommodate students of varying physical disability needs
- 14 monitor arm desk mounts.

Specialized Instruction With the department's move to the 3rd floor of the Bertolini Student Services Building, classes and workshops are often now scheduled in Bertolini. In an effort to provide access and instructional services to students with disabilities in a centralized location, the following technology needs have been identified:

- The conversion of a classroom (4874) to a student lab, with computer garages
- In addition to utilizing instructional space in Bertolini, many DRD courses are taught in Maggini. Upgrading computer instructor stations are requested in Maggini 2702 and 2708.
- One Ergonomic desk that can be raised and lowered for 2702 is also requested.
- For student instruction, two class sets of 25 iclickers are requested and one class set of 25 Livescribe pens.

Support Services In order to adequately provide accommodations for DRD students to independently access academic coursework, the DRD department needs to replace the current technology available to better support student's classroom accommodations.

- 50 digital recorders
- 20 tape recorders
- 100 Livescribe pens, sets of paper, and sets of ear bugs/microphones
- 3 automated height adjustable tables for classroom use throughout the district

DRD Testing Services is relocating to larger space in Plover Hall, next to the Assessment offices. The anticipated move will require an increase in the amount of available DRD Testing student centers, to accommodate students. The Student Success Act requires that every matriculating student complete an Assessment. Students with disabilities will need access to more Assessment computers with Assistive technology software and hardware available. The anticipated move will require the following technology upgrades to effectively serve our student population, and the increased need in access and testing accommodations due to the implementation of the Student Success Act:

- 10 Computer Garage Tables
- 5 All in One PC's

- 15 Touch Screen Monitors for Placement Exams
- 3 iPad Airs and Bluetooth keyboard Cases
- 1 Smart board Interactive White for Support Services Staff
- SAM DSPS Software to track testing
- 5 flash drives with 32mb storage to store students testing documentation
- 2 keypads for SARS track login
- 4 ergonomic staff desks (3 in Santa Rosa; 1 in Petaluma)
- Surveillance cameras with remote viewing for support specialist and coordinator
- Copier with ledger-size print enlargement capability
- Portable Braille embosser with Tiger Suite software (Santa Rosa campus)
- Braille keyboard (Santa Rosa campus)
- 3 two-way radio sets for support specialist staff to communicate delivery of furniture and exams throughout the district
- 6 sound masking machines located in distract reduced, and private rooms, for students to utilize during testing
- 2 sound-cancelling headphones with disposable ear covers (one pair in Santa Rosa and one in Petaluma)

Strategies/Resources

In order for the Disability Resources Department to fully support student's access throughout the District, funding for accessible equipment and support can be distributed equally by district programs and departments: [Ex. The cost of 15 touch screens for assessment tests can be shared by Assessment; the cost of upgrading instructor technology and installing accessible workstations for students can be added in the Instruction Equipment Budget]In addition the DRD department will utilize alternative funding opportunities including grants to purchase instructional equipment [Ex. Live scribe pens will be purchased with Grant Funds]

- It is estimated that the cost of 17 iPad Airs with cases and keyboards is $8,400
- It is estimated that 18 height adjustable ergonomic desks is $24,200
- It is estimated that the cost of 100 Livescribe pens with 100 sets of paper and 100 ear buds/microphones is $18,000
- It is estimated that the cost of 5 Desktop PC's with testing software is $3,000
- It is estimated that the cost of 15 touch screen monitors for placement exams is $3,450
- It is estimated that the cost of 3 iPad Bluetooth keyboard cases is $240
- It is estimated that the cost of 1 smart board Interactive White Board is $2,500
- It is estimated that the cost of SAM DSPS software is $2,300 annually
- It is estimated that the cost of 3 ergonomic automatic height adjustable tables for district classroom use is $4,500

- It is estimated that the cost of a surveillance camera system is $550
- It is estimated that the cost of a portable Braille embosser is $2,590 (including software)
- It is estimated that the cost of one Braille keyboard is $105
- It is estimated that the cost of 3 two-way radio sets for district delivery of accessible furniture and exams is $450
- It is estimated that the cost of 6 sound masking machines is $360
- It is estimated that the cost of 2 noise cancelling headphones is $600. Disposable covers are $50 for a 100 pack

6.10. CalWORKs

Current Environment

The CalWORKs Program is currently located in of the Bertolini Student Center, 3rd floor. There are 13 computers and 14 printers utilized by the staff and students (9 printers are "all in one" printer/copier/fax machines, 4 are laser and 1 is a color laser; "the all in one" printers are not installed as fax machines at this time). This includes two student access stations, each with a printer and a computer dedicated to timekeeper, for training purposes only. In addition, the department has one laptop and a fax machine; a copier is also provided by the District.

Additional tech usage includes the SARS appointment scheduling software, MIS, SIS and an in-house Access database used for case management. CalWORKs began to "flag" eligible students in the new Student Information System with its launch beginning in November 2008. However, the "CalWORKs pages" in the SIS are not sufficiently comprehensive to track all of the MIS and case management needs of the program; staff will continue to utilize the Access database and submit "flat files" to Information Technology for conversion and submission to the Chancellor's Office. A CalWORKs module is being worked on to provide access to necessary reports like midterms and final grades.

Future Plans

The CalWORKs staff will continue to have access to the Career Center's computer lab for job search workshops and other group activities. If funding allows, the CalWORKs staff may have a small presence on the Petaluma campus if CalWORKs student numbers increase with the growth of the campus. Petaluma Campus students need access to a timekeeper program for CalWORKs supervised study hours. This may be accomplished with a second dedicated computer on the Petaluma Campus. In addition, CalWORKs needs a replacement fax machine since the current one is not working. CalWORKs faxes are routed to the Counseling Office for the time being.

Strategies and Resources

The CalWORKs staff computers and printers will continue to need replacement as a part of the District's replacement cycle; the new equipment noted above will need to be purchased. At this time CalWORKs has no categorical funds available for equipment and purchasing guidelines from the Chancellor's Office are fairly restrictive. This could possibly change in the future. Estimated cost of new equipment is ~$6,000.

6.11. Career Development Services (Career Center & Student Employment)/Transfer Center

Current Environment - Santa Rosa

The Career Center and Student Employment are located in the Bertolini Student Center. They are co-located with the Transfer Center and Work Experience and are adjacent to the Disability Resources department.

Computer Lab # 4876

The Career Center lab is shared with the Transfer Center and contains 18 computer stations and one laser printer. There is one workstation accessible for students with disabilities that is adjustable for wheelchairs. There is also a video/DVD player. This lab is utilized by students for both Career and Transfer purposes.

Career/Transfer and Student Employment Reception Areas

There are 2 kiosk computers in the larger reception area. One is designated to Student Employment job search functions. The second one is allocated to the Work Experience program. There are 2 computer workstations and 1 printer in the front reception area utilized by student employees. These workstations are used to check students in for appointments or visits to the Career/Transfer Center and Student Employment as well as processing work in the area. Student Employment also has a 1 computer kiosk for students looking for employment, applying for jobs, or accessing the SRJC student job board. There is also one Discovery copy machine located in the front reception area.

Waiting Area

Replace kiosk computer when it reaches replacement age.

Student Work Area

The student work area has two computer work stations with 2 ink jet printers and 1 laser printer. One workstation is allocated to Student Employment for processing student timesheets and related work. The second workstation is allocated to the Transfer Center for student projects.

Staff Technology

Staff work areas consist of 2 Administrative workstations, 1 office for the Career Services Advisor, 1 office for the Student Employment Coordinator, Transfer Rep office, Transfer Director Office and Career Development Services Manager. Each work area has a designated printer and all computers are networked to the laser printer in the Student Work Area in addition to the Discovery copy machine.

Software

Students visiting the Career, Transfer or Student Employment areas are logged in using the SARS roster function, allowing for the capture of data regarding specific reasons for student visits. SARS appointment scheduling software is also used to make appointments for counselors and the Career Services Advisor who works in the Career Center.

Online Resources assist self-directed students with Career Planning and Job Placement, key components to student success outlined in the Student Success Initiative. Current technology used for Career Development and Student Employment includes three computer web-based career guidance programs: EUREKA ($1,900), Career Cruising ($850), and College Central Network (CCN) ($1,300). These programs enable students to research occupational and academic information and do some career assessment and view future career trends data. Student Employment utilizes College Central Network to host the Student Employment Job Board. This site assists students with jobs, internships, resumes and portfolio development and has a large database of career/employment articles for students and alumni to use. The addition of the CCN program has also made it possible for the department to conduct Virtual Career Fairs in addition to its annual Career Expo and Job Fair.

Seminar Room #4875

The area also includes a seminar/classroom, which has a LCD projector and is set up for a media enhanced classroom installation.

Future Plans

As outlined in the Student Success Initiative student access to and the utilization of technology is one of the key components of improved student success. “Scaling up the use of technology is one of the few viable approaches to reach substantially more students, many of whom prefer navigating their pathway through community college in an online environment” (p.23, Rec #2, 2013). The following new and improved technology requests are in response to the Student Success Initiative commentary that there are students “who lack access to technology or are not adequately prepared to utilize it and those who need more complex interactions”. This request is also in alignment with the District’s Strategic Planning Goal B4, “Identify and implement responsive instructional practices that increase the learning and success of our diverse students.”

- Upgrade Staff, Student Workstation and Computer Lab Computers approaching replacement age to current models and with uniform operating systems.
- Request for Staff Computers to be upgraded with webcams to facilitate online face to face appointments.

Rm #4785
This room is used for seminars by the Career Center, Counseling, Work Experience, New Student Programs, Scholarship, MESA, College to Career, and CalWORKs.

Computer Lab # 4876

- Request to purchase 1 Digital Monitor. Currently there is no Electronic Screen in Area 3 East. Research shows that students are responsive to new technology. More programs are creating videos for their programs including CTE programs. These videos could be looped on the screen and would expose students to more career possibilities.
- Request to purchase 25 IPADS or Tablets and a locked cabinet for storage of equipment. The computer lab has only 18 computer stations. The Intro to Career Development classes are not taught in a room with computer access. Class sizes have at least 40 seats. Currently students need to share computers or the instructor needs to divide the class and come to the lab on two separate occasions.

Strategies and Resources

- Estimated cost for new and replacement technology over the next 3 years is ~$50,000
- Estimated cost of GO PRINT Designated Computer~$1500
- Estimated cost of 25 IPAD/Tablet~$11,250
- Estimated cost of Locket Storage Cart~$1,000.
- Estimated cost of Digital Monitor~$3,000.
- Estimated annual software costs are ~ $4,000.

Current Environment - Petaluma

On the Petaluma Campus, Career Development Services is located in Jacobs Hall, Room 116, as a part of a shared Resource Center. Also located within this space are the Financial Aid Office and the Work Experience Office. During the academic year, the main room is used for a career resources library, seminar room, computer stations and waiting area for appointments. This area includes three (3) computer stations for student use in Career, Student Employment or Work Experience program use. They are all loaded with the career software packages (Career Cruising, Eureka) and have MS Office Suite and Internet capability for students wishing to access our online job board and other resources. Also, there is one station for student check-in

and SARS, located behind the main counter. The CDS staff office has a computer also, and all four (4) computers (student kiosks + office) share the same laser printer in the reception area. This main room is re-purposed during the summer as a Welcome Center for new students, with all existing technology being used.

The seminar area is equipped with a LCD projector and drop down screen.

There is also a small, Discovery tabletop copier for the offices in the area to use, which was re-purposed from a program that was relocated onto the Santa Rosa Campus. All software in this area is mentioned in the Santa Rosa section as they are licensed for use throughout the District.

Future Plans

The technology in the Resource Center is limited and is approaching replacement age; all 5 computers (3 – student kiosks, one office, one reception) and the laser printer will need to be replaced in the next 3 years. Also, one Disability Accessible computer workstation should be made available in the Resource Center. All computers should be upgraded with the same operating systems for the installation of Disability Accessible software.

- Request for staff computers to be equipped with webcams to enhance student access with online appointments
- Request for 25 IPADS or Tablets and a locked cabinet for storage of equipment. Students will be able to use these tablets during Career Center, Counseling, Transfer, Work Experience, Financial Aid seminars and workshops.
- Request for 1 Digital Monitor for the Resource Center. Currently there is no Electronic Screen available. Research shows that students are responsive to new technology. More SRJC department are creating videos for their programs including CTE programs. These videos could be looped on the screen and would expose students to more career pathways and possibilities.

Strategies and Resources

- Estimated cost for completion of media technology in Resource Room is ~$3000.
- Estimated cost for new and replacement technology over the next 3 years, including laser printer is ~$12,000.
- Estimated cost for a Disability Accessible workstation is ~ $2,000.
- Estimated cost of Digital Monitor ~$3,000
- Estimated cost of 25 IPAD/Tablet ~$11,250

General Technology Request beyond Career/Transfer/Student Employment Area

1) As already discussed online instruction and resources have become an essential component of a successful student community college experience.

The Santa Rosa Campus is not equipped with smart classrooms and has very few computer labs available for instructional purposes. I recommend that the District purchase a number of IPAD/Tablets for Instructor check out for use in the classroom. This is perhaps best done through our IT department.

2) Student Services is comprised of large and small programs serving the needs of students. Larger programs have more staff some of whom have greater technological abilities. Some programs even have a designated computer person on staff. I am also thinking of the Petaluma Campus, Shone Farm and the Southwest Center, locations with small staff. For example the Admin III in Admissions and Records is very knowledgeable about SharePoint. In our area the Administrative Assistants do not use SharePoint and have no familiarity with that program. As time progresses, the small departments and our remote locations can fall further behind in the areas of technology. We can't always wait for more staff to be approved or buildings to be built. Perhaps we could open up an ongoing discussion on how to share the technical knowledge and expertise from staff in larger programs with smaller programs with fewer resources. One idea is for a tech savvy staff person, or faculty to be temporarily assigned to another department or District location needing an upgrade in hardware, software or training.

Accomplishments:

- Increased the number of portable CCTVs available for student use to three (3) per campus, and the number of stationary CCTVs available in the libraries to two (2) per library.
- Purchased four (4) new Assistive Listening Devices for hearing impaired students to use in classes.
- Increased efficiency in Alternative Media order processing through the movement of the Alternative Media Request form to File Maker Pro Web, so that the requests directly feed into the Alternative Media Database.
- Increased efficiency of Alternative Media production through the transition from Kurzweil to Texthelp Read and Write Gold, which will read PDFs and eliminate the need to produce specialized Kurzweil-formatted Alternative Media files.
- Piloted new programs within SARS such as self-scheduling and self-check-in for counseling students. Done
- Add new 42" digital display/TV to Counseling Department lobbies for Santa Rosa Campus.
- Redesign of Degree Audit System.
- The IT Department no longer prints labels for TAB filing system.
- The new on-line Foundation application in SIS was piloted spring 2013.
- A scanner for the new SIS Scholarship database will be needed when programming is completed and tested.

- Develop alternate method for FAFSA load, ISIR processing and file building.
- Cost of new printer and software for TAB label production covered by BFAP/SFAA funds.
- Purchased scanner for Scholarship.
- Completed the media-enhanced build-out for the seminar room 4875 Bertolini Student Center.
- Two (2) new ID printers with warranties and software.
- Purchased new ID system mag stripe encoder and ID card reader system as prototype for developing new one card system, including using ID card to collect data mandated by Student Success Act.
- Implemented an electronic paperless records system for Student Psychological Services.
- Implementation of official transcript module.
- Upgraded to electronic storage system (Imaging database).
- Replaced three (3) imaging scanners in Santa Rosa and one (1) on the Petaluma Campus for ARED.
- Replacement of color laser printers (HP4500) in ARED.
- Automated the submission of forms online in ARED.
- Replaced or upgraded Assessment Center's computers and printers.
- Implementation of GED computerized testing.
- Installment of security cameras in Assessment Services.

7.0. Business Services, Human Resources, & District Police

7.1. Business Services & Human Resources Support Software

Current Environment

Santa Rosa Junior College is currently dependent on the Sonoma County Office of Education (SCOE) for the production of its payment warrants. SCOE decided to move to new computer hardware (Intel Servers) and enterprise software (Escape). In 2010, after a comprehensive review and assessment, Santa Rosa Junior College migrated from the CECC Financial 2000 system to Escape Technology for the subsystems: budget development and management, general ledger processing, accounts payable processing, payroll processing, STRS and PERS retirement systems

processing, purchasing, fixed assets tracking, store's inventory management, and Human Resources management.

Future Plan

SRJC continues to work with Escape Technology for college-specific software needs on an ongoing basis.

Strategies/Resources

The district will maintain Escape Software with the following estimated costs:

- *Annual maintenance $140,000.*

7.1.1 Business Services Petaluma

Current Environment

The Faculty Support Office functions as a copy center/mailroom/Scranton grading & homework drop off area/Faculty work area for Petaluma Campus. It is utilized by full-time faculty, adjuncts, and staff.

Future Plan

Improve the efficiency of the faculty support business office operation through the purchase of needed equipment.

Strategies/Resources

Replace multi- function copiers, heavy duty shredder, test reading Scantron equipment, and update workroom Technology.

Estimated Cost of $110,000.

No additional staff required

7.1.1.2 Business Services Petaluma – Multi Function Copiers

Current Environment

Administration and Business Services Office serves Petaluma Campus. There are four managers, including two Deans and one Vice President, and three classified staff in the Administration wing. Our copier is 13 years old and networked printer is 9 years old and we do not have a networked scanner for faxing/e-mailing documents. Our equipment is inefficient and needs to be updated.

Future Plan

Improve the efficiency of the administrative and business office operation through the purchase of needed equipment

Strategies/Resources

Purchase multi- function copier/printer/scanner for Administration and Business Services Office.

Estimated Cost of $13,000 over a 5 year period

No additional staff required

7.1.1.3 Business Services Petaluma – Security Cameras for Cashiering Areas

Current Environment

Accounting and Admissions and Records staff take student payments in the form of cash, check, and credit card. Currently there aren't cameras that show transaction activity. The existing cameras are positioned towards the door and are intended for security purposes only.

Future Plan

Improve the security of the administrative and business office operation through the purchase of needed equipment.

Strategies/Resources

Video cameras to monitor cashiering areas

Estimated Cost of $15,000

No additional staff required

7.1.1.4 Business Services Petaluma – Event Ticketing Software

Current Environment

The Box Office, located in the front of the Carole L. Ellis Auditorium, has seating for 249. It is used for events throughout the year and for the Cinema Series, every fall and Spring Semester. The current box office software is slow to process ticket sales and is not set up for taking credit card payments. It does not easily accommodate will call sales.

Future Plan

The future plan would be to have a District-wide integrated software system that includes box office ticket sales, a credit card sales and will call option, and possibly tie into Facility Operations and event planning software.

Strategies/Resources

Estimated Cost not determined, probably be part of a larger initiative on a District level for an Integrated Event Planning Software System

7.1.2. Human Resources

Current Environment

The conference room in the Button Building is utilized regularly for interviews, meetings and trainings. Technology is often needed in this room and the existing equipment is not sufficient. The existing equipment includes an outdated pull-down screen and laptop and projection unit that is not installed in the room in an efficient and modernized way to make the best use of the conference room facilities (this equipment is currently placed in the center of the conference table rather than being permanently affixed to the room to allow for maximum space usage).

It is especially important that the technology in this room be upgraded since the room is used regularly by interview committees and is often the first impression that we make with potential candidates who might be interested in pursuing careers at our District. In the past 5 years, the frequency of requests for accommodation with Skype interviews has been increasing at a regular rate and this has allowed interview committees to meet with candidates who might not have otherwise been able to afford the cost of travelling to SRJC for an in-person interview. The interviews with the Skype option have allowed us to be more flexible in accommodating candidates who request this option. Currently, we do have Skype capability in the conference room, but we have experienced technical difficulties with the connection, so the majority of Skype interviews have been scheduled in the Doyle Library since the existing equipment in the Button Conference Room is not reliable.

Future Plan

Fit the conference room with the proper equipment to accommodate HR needs for employee interviews and department meetings.

Strategies/Resources

Purchase the required equipment: large screen display monitor – minimum of 50" x 30" (to replace pull-down screen), relocation of projection unit to overhead display (utilize current projector, or purchase replacement, if needed, purchase a permanent computer to maximum space usage (or keep existing laptop if needed) with Skype capabilities and videoconferencing option, if possible (use Doyle 4228 as example) and purchase of a document camera at an estimated cost of $5,600.

No additional Staff required

7.1.2.1 Human Resources – E Recruitment Software Maintenance Fee

Current Environment

The employee recruitment software was successfully implemented, this provides an online tool for the employment application process.

Future Plan

The employee recruitment software tool requires annual licensing fees and maintenance

Strategies/Resources

Allocate resources to pay for annual licensing and maintenance to maintain the software tool at an annual cost of $24,000
No additional Staff required

7.1.3 Bookstore – Direct Link to Textbook Information

Current Environment

TABLE UNTIL NEXT PLAN UPDATE CYCLE

Future Plan

Strategies/Resources

7.1.4 Bookstore – Campus Card for Students

Current Environment
TABLE UNTIL NEXT PLAN UPDATE CYCLE

Future Plan

Strategies/Resources

7.2. Document Imaging System

Current Environment

In October of 2013 the SRJC contracted with a vendor to perform document imaging and indexing services for payroll records. Imaging equipment was purchased as part of the project implementation, the project has been on going for the past year. Based on future plans this initiative should expand to other areas of the SRJC.

Future Plan

Implement a College-wide document imaging system providing image and data archiving and data management of statements, reports, invoices, etc. This system would provide a web interface allowing users on the intranet to access historical and hardcopy documents in electronic form. As much as possible the system will be integrated with the multi-function machine replacement of copiers that can scan records into the appropriate format for indexing and archiving.

Strategies/Resources

- *Implement College-wide image capture and retrieval system. Estimated cost: $350,000.*
  - *One-time training cost $6,000.*

7.3. Bar Code Scanner System

Current Environment

Santa Rosa Junior College is currently using a stand alone bar code system that was developed in-house and used for fixed asset inventory scanning. The tool is not integrated to the finance system. Fixed asset tags and shipments received in the warehouse already have bar codes on them, but are not used. The current system includes manual entry of available bar code data. An integrated fixed asset system would greatly impove tracking accountability, reporting, aid in audit reports and better overall control of District assets and their disposal. Fixed Asset tracking is mandated and audited annually. This system is critical to meeting mandated accounting standards for California Community Colleges.

Future Plan

Implement a College-wide bar code scanning system for updates and audits of physical inventories and the warehouse receiving/delivery function.

Strategies/Resources

- *Implement College-wide bar code scanning system(s). Estimated cost: $40,000.*
- *No additional staff required.*
  Estimated annual maintenance cost: up to $8,000.
  One-time training cost is included in the estimated cost.

7.4. Online Bidding System for Purchasing

Current Environment

The use of automated systems has been slow coming to the Purchasing Department mostly due to lack of appropriate funding. The implementation of the Escape System has provided integration for some business processes in Finance, including the requisition and purchase order transaction process, even though purchase orders are still being faxed to vendors and not released electronically. There is no current automation in the bid and quote process to streamline remote access for vendors to register for participation in solicitation processes. Such a tool would provide more efficient management of quotes and bids, provide history on vendors and contract awards which would be available to staff throughout the college for planning and information purposes. It would also allow for added reporting tools for commodity spend and other common purchasing related reports used in strategic procurement initiatives.

The e sourcing tool application would align the procurement function with several District Strategic Plan Goals including D, E and H as they relate to improved institutional effectiveness through strategies that provide greater transparency, technology integration and saving time and resources by reducing the amount of printed materials and manual processes. The features provided by the e sourcing tool include on line vendor registration, the electronic release of bid and quote documents, electronic receipt and subsequent tabulation of bids, contract management and insurance certificate tracking. The resulting bid award information may be made available to vendors and the public in a dedicated e sourcing web site.

In a recent purchasing districtwide survey respondents stated that the #1 area of importance for purchasing is the use of technology tools in procurement.

Future Plan

Implement an online purchasing system where vendors can self-register and maintain their general organizational information, list the commodities they offer, specify their shipping and payment terms, certify their contractor's license, etc. and respond to electronic bids online. District Staff other than purchasing staff may utilize this tool to conduct informal bids (quotes). For an added fee, the software solution contains an integration tool for requisitions to be generated based on quote or bid award without having to re-input the requisition information into the purchasing system.

Strategies/Resources

- *Implement online electronic sourcing purchasing system(s). Estimated cost: $26,245.*
- *No additional staff required.*
  Estimated annual software license cost: $25,500.

7.5. Print Management System

Current Environment

The Distict implemented a departmental copier program and an estimated 76 departments are utilizing multi-function copiers that handle copying, scanning, faxing and printing. The units are serviced by the vendor who also provides the toner at no additional cost, staples are purchased by the individual departments. The units are leased and departments are charged back on a "per click" basis, the revenue for chargebacks pays for the equipment lease costs. Based on a recent survey, it appears that there are at

least 166 self standing printers throughout SRJC campuses. Most printers are not on maintanenace contracts and the supplies are purchased and maintained by each individual department.

Several vendors contacted the Purchasing Department offering printer management program solutions for stand alone printers. This type of service includes the vendor servicing the equipment and providing supplies at a per print cost.

The Purchasing Department conducted a needs assesment survey to determine if the consensus amongst users would support conducting an RFP process to contract for a printer management program initiative. The results of the survey indicated that 63.5% of users were not interested in having such a program, 21.2% were interested in printer maintenance only and 15.4% were interested in a printer management program.

Currently stand alone printers are purchased through the IT equipment request procedure, purchases are done using the standardized printer models provided by IT. There is no District policy in place to manage purchases of individual printers. The VP of Business Services has indicated that individual printer purchases are allowed when justified and funded by the individual department budget.

During the past three years the District has procured white paper in equal quantities with a significant increase in color paper purchases.

Future Plan

Implement solutions that will reduce printing costs for the District while reducing the use of paper and supplies to reduce overall costs in alignment with the District's strategic plan objectives for sustainability and increased institutional effectiveness for continuous improvement and cost containment.

Strategies/Resources

- *Develop a policy to reduce equipment purchases, printing and paper use. Estimated cost: $TBD.*
- *No additional staff required.*
  Estimated annual maintenance cost: TBD.

7.6 District Police CCURE System Maintenance

Current Environment

The District has implemented (through bond construction projects) the CCURE card security/access system. District Police is responsible for maintaining the system as it expands to cover both new construction and the renovation of existing buildings.

Future Plan

Continue the implementation and expansion of the CCURE system and maintain the existing systems.

Strategies/Resources

- *Upgrade of existing CCURE system(s). Estimated cost: $36,000.*

  No additional staff required.
  Estimated annual maintenance cost: $68,000

7.6.1 District Police Telephone-Radio Recording System

Current Environment

The current recording system for police dispatch and police radios is due for replacement within the next 24 months.

Future Plan

Implement a replacement recording system.

Strategies/Resources

- *Implement a replacement recording system(s). Estimated cost: $20,000.*

7.6.2 District Police Dispatch System

Current Environment

The current telephone/radio dispatch system is nearing the end of its useful life and requires replacement.

Future Plan

Install replacement telephone/radio dispatch equipment.

Strategies/Resources

- *Implement replacement telephone/radio dispatch system.*
- *Estimated cost: $25,000.*

7.6.3 District Police Telecom/Radio switch

Current Environment

District Police dispatch needs a telecom/radio switch with a headset controller to operate dispatch more efficiently.

Future Plan

Acquire telecom/radio switch with headset controller.

Strategies/Resources

- *Implement telecom/radio switch with headset controller.*
- *Estimated cost: $3,000.*

8.0. Faculty, Administrator, & Staff Computers

8.1. Implement Total Cost of Ownership for hardware and software

Current Environment

The philosophy of the District has been to provide all those who could benefit with the appropriate desktop or portable computers. This philosophy has in large part been successfully implemented within the boundaries of limited funds. The process to replace systems is initiated by faculty, staff and administrators when they determine that they need to replace their technology. A review process is in place to validate the need for replacement and when necessary replacement systems are installed. Those without an assigned computer have access through open labs or shared computer resources. Software for these computers includes the standard Microsoft Office Suite (Word, Excel, Power Point and Outlook), virus protection software, Adobe products (InDesign, Acrobat, PhotoShop), Windows operating systems, Macintosh operating system (10 and above), and various specialty applications.

Future Plan

Establish a baseline of access to computers for faculty and staff that includes a technology replacement program for computers and related equipment at all sites. It is recommended that the College adopt the "Total Cost of Ownership" model presented in "Technology II Strategic Plan" including the following elements:

- *There will be a five to seven year replacement rate for computers and related equipment if appropriate. The age of the system is measured from manufacture date as opposed to purchase date when determining replacement of used systems.*
- *One PC for every full-time faculty member who requests a computer.*
- *One PC for every four adjunct faculty.*
- *Each PC will be equipped with office software that includes word processing, spreadsheet, E-Mail, browser, anti-virus, and presentation design software.*
- *Each PC will have access to appropriate administrative systems and institutional data.*
- *Each PC will have network access.*
- *IT will purchase new systems without monitors whenever practical.*

Strategies/Resources

- *Estimated cost to renew desktop technology every five to seven years: 1200 x $1,500 = $1,800,000.*
- *IT will acquire and install new desktop technology at an estimated 75 systems every three to four months.*
- *IT will continue to evaluate new operating systems and software applications and update our standard installation image as appropriate. Recent examples of this evaluation process include Windows 8 and Adobe CC.*
- *IT will continue to evaluate new mobile computing options in order to better inform the District of the benefits and limitations of different solutions. Recent examples of this evaluation process include Windows Surface, Windows Surface Pro, Google Chromebook, Android tablets, and Apple iPad.*
- *Question need for dual boot Macs going forward. Only allow dual boot Macs where there is a business need. Currently, cost of Macs for software support is 2x a PC due to two sets of OS and applications software installed.*

9.0. Institutional Servers

9.1. Primary Administrative System: Servers

Current Environment

The College has more than 85 different physical servers running the Windows and Linux operating systems. These systems include those used for our College Wide Information System (CWIS), Active Directory, E-Mail, Shared File Resources, SRJC Foundation, medical records (Medicat), Dental Office Training (Dentrix), Financial Aid, Escape (business system), DHCP (Dynamic Host Configuration Protocol server), Assessment Testing, Citrix, Sharepoint, Counseling Scheduling, and Web Services.

The college has also designed and implemented a robust virtual server environment using Microsoft's Hyper-V platform which runs on multiple servers allowing the sharing of resources. It is more complex to maintain but reduces overall cost, increases resource efficiency, allows for easier backups, built-in redundancy and a reduced ecological footprint.

Currently most of our stand alone servers are nearing or already out of warranty. We are covering out of warranty issues by consolidation and in-stock spares. But, as these servers continue to age, we must plan to replace a number of them each year or expand our virtual environment to allow for the migration of these servers to the Hyper-V platform.

Future Plan

The necessity to constantly assess performance levels of the primary Student Services and Business Services server is obvious. There is a high expectation that performance will always be responsive to the demands of the institutional users. In order to provide this response, there has been, and will continue to be, appropriate resources applied to the primary administrative system.

The continued success of this farm of servers is dependent on three things. First, it is necessary to have technical staff whom are trained and available to maintain and support the servers as well as the virtual environment. Second, the existing servers must get periodic upgrades to the hardware, operating system software, and applications. Third, these systems must be replaced every five years, and new systems must be installed as new technologies come online.

Strategies/Resources

- *Each spring semester analyze the performance of institutional servers.*
- *Based upon the annual system performance report, continue to make minor upgrades.*
- *Plan to mirror image some of the most critical systems: Email, SIS, Escape, and Citrix servers to provide redundancy and allow maintenance during normal business hours.*
- *Investigate and evolve toward virtual servers for better asset utilization.*
- *Purchase/replace 5 stand-alone servers per year: Estimated cost: $40,000 annually. (Hardware: $30,000, Software: $5,000, Labor 200 hours: $5,000)*
- *Purchase/net new 5 servers per year and additional hardware to expand our virtual environment: Estimated cost: $37,500 annually. (Hardware: $30,000, Software: $2,500, Labor 100 hours: $5,000)*
- *Purchase/replace six Uninterruptible Power System units per year and batteries as needed: Estimated cost: $8,000 annually.*

10.0. Networking Infrastructure

10.1 Wired Local Area Network (LAN)

Current Environment

The current environment is dominated by three recurring themes: dependability, speed, and security. Standards have been developed for the major facilities at the Santa Rosa Campus, Petaluma Campus, Shone Farm, Public Safety Training Center, and Southwest Center. Each site has a core switch that collects and distributes data to the remote rooms and buildings at Gigabit or Fast Ethernet speeds. Buildings typically are connected with fiber or Category 5/6 copper wire, and have a Gigabit or Fast Ethernet switch, which serves as a collection point for other switches in the building. The users are connected to these switches by copper cable at speeds of 100 or 1000 megabits per second.

Future Plan

The technology used to connect users on local campuses and throughout the world has been changing at an ever-increasing rate. This trend is expected to continue into the future, which makes planning more short-term than long-term. One observable constant is that users want faster, more dependable, and more secure networks. Therefore, the primary goal is to design our networks so that they deliver ever-increasing speed, availability, dependability, and security.

Strategies/Resources

- *Within buildings, continue to upgrade wiring to Cat 6 as part of significant moves and re-model plans. Estimated cost per building $5,000 – $40,000 depending on size of project.*
- *Within buildings, upgrade wiring between IDFs to fiber optics wherever copper still exists. Estimated cost $100,000 for 10 x $10,000 per connection.*
- *Between buildings, upgrade the fiber optics at the Santa Rosa campus to allow for a 10 Gigabit backbone from Bussman. This will require an initial assessment of our current fiber optics and replacement as necessary. Estimated cost $200,000 one time.*
- *Within buildings the goal is to provide gigabit Ethernet (1000 Mb) to the desktop using Cisco switches. Once infrastructure allows it, these switches will be replaced to support the 10 Gigabit backbone. Estimated cost $100,000 annually.*
- *Upgrade Bussman Hall core technology switches, routers, and*

security devices to allow for 10 Gigabit connectivity to servers and buildings. Estimated cost $300,000 one time and $40,000 annually.

- *Additional network equipment replacement/upgrades at Santa Rosa, Petaluma, and Windsor. Estimated cost $30,000 annually.*
- *One full-time Network Technician should be hired for each 9,000 full-time equivalent students or 500 connected computers to support the network. Estimated cost $83,866 annually.*

10.2 Wireless Local Area Network (WLAN)

Current Environment

Wireless access for both employees and students has become an expectation that is challenging to keep up with. Although extensive wireless technology exists on all campuses (Santa Rosa, Petaluma, Public Safety Training Center, and Shone Farm), the usage and demand for bandwidth has greatly impacted our network environment. Our wireless network is configured for dual access serving both Staff/Faculty in a secure manner and serving Students and guests of the college in a more open accessible manner.

Future Plan

IT will continue to expand, where appropriate, the use of wireless technology for the staff and faculty that need to connect mobile devices to District resources and for students and public access users looking for internet access.

Strategies/Resources

- *Shone Farm wireless expansion – recently upgraded infrastructure and a new high speed connection allows for much greater expansion of Shone Farm's wireless footprint both in buildings and outdoors. 10 x $1000 per access point/network buildout: $10,000*
- *Shone Farm greenhouse connectivity – install wireless bridges to connect greenhouse to the Shone pavilion to expand network connectivity. 2 x $2500 per bridge/antenna/network buildout: $5,000*
- *Replace end of life Cisco 1231 Access points: 40 x $1000 per access point: $40,000*
- *Target Haehl, Tauzer, Quinn, and Call for greater wireless expansion. 25 x $1000 per access point and 20 x $500 for network buildout to support access points: $35,000*
- *Expand our outdoor wireless footprint. 10 x $3000 per outdoor access point and power/network expansion to support: $30,000*
- *Purchase PRIME for wireless management to replace end of life Wireless Control System. $25,000*

10.3 Wide Area Network (WAN)

Current Environment

Internet Connectivity

Internet connectivity is provided by a Gigabit (1000 Mb per sec) connection from CENIC (Corporation for Education Network Initiatives in California) with a backup DS3 (45 Mbps) connection for failover. Currently both primary and backup connections are located at the Santa Rosa campus with remote sites connecting to Santa Rosa to access the Internet and cloud services.

Core site-to-site connections

Petaluma connects directly to the Santa Rosa campus with a dedicated Gigabit connection and a backup T1 (1.5Mbps) for failover. PSTC connects directly to the Santa Rosa campus with a dedicated DS3 and a backup T1 for failover. Shone Farm connects directly to the Santa Rosa campus with a dedicated Gigabit connection. A wireless point to point 10 mile bridged connection from the Santa Rosa campus, which allows for approximately 2 Mbps of bandwidth, is used for backup. Southwest Center connects using Comcast Business class service directly to the internet at 50 Mbps download speeds and 10 Mbps upload speeds. Connectivity to the internal Santa Rosa campus is allowed through a secure VPN connection.

Future Plan

- As services that were once hosted on site move to a cloud hosted paradigm, more attention to a robust and resilient network environment becomes critical as we shift from a client/server model to a client/cloud model. With this in mind, both higher speeds and redundant network equipment are necessary. Campus to campus connectivity should be upgraded to gigabit speeds where it does not exist and our internet connection should be upgraded to 10Gbps as we expand our backbone speeds. Redundant routers should be utilized at the edge to maintain business continuity in case of equipment failure.

Strategies/Resources

- *Upgrade PSTC to Santa Rosa connectivity to Gigabit speed. Maintain DS3 as backup and retire T1. Estimated cost $15,000 annually.*
- *Upgrade Petaluma to Santa Rosa backup connection to Gigabit speed. Retire T1. Estimated cost $15,000 annually.*
- *Between Santa Rosa and cloud, upgrade to 10 Gigabit connection and maintain Gigabit connection as backup. Retire DS3. Estimated cost $20,000 annually.*

- *Alternatively, move backup Gigabit connection from Santa Rosa to Petaluma for greater business continuity. Additional edge switch/router: $10,000*
- *Replace end of life edge router in Santa Rosa to dual routers with 10 Gbps capabilities. 2 x $25,000: $50,000*
- *Replace end of life WAN routers in Santa Rosa, Petaluma and PSTC. 3 x $25,000: $75,000*
- *Establish a secondary backup connection to the internet from the Petaluma Campus, $14,000 annual cost.*
- *Will require firewall, estimated cost $50,000.*

10.4 Storage Area Network (SAN) and Backup

Current Environment

Data Storage: The College uses an HP EVA3000 & HP EVA4000 SAN that need to be replaced/upgraded every five years.

Data Backup: The College uses a disk-to-disk backup methodology. This provides us with quick backup on a scheduled basis without interrupting our production servers.

Future Plan

As we continue to grow our virtual environment, storage requirements will move away from SAN technology and towards the virtual environment. Backup will continue using a disk-to-disk backup methodology but we will investigate the feasibility and cost of cloud backup solutions where it is deemed appropriate. Business continuity requires us to look at alternate locations for accessible system environments such as SIS and Escape. Currently we are exploring using Petaluma as a site to host these systems in a virtual environment so they would be accessible in a disaster. This adds weight to the idea of moving our backup Internet connection to the Petaluma campus as well.

- *Purchase and build a new virtual environment for Petaluma to host backup SIS and Escape systems. Estimated cost $150,000.*
- *Expand the storage capacity of our current virtual environment. Estimated cost $30,000.*
- *Purchase bare hard drives for data backup. Annual cost: $3,000.*

11.0. Telephone, Fax & Voice Mail Systems

11.1. Legacy Telephone Environment

Current Legacy Environment

The Mitel SX-2000 Light phone switch still provides phone services to parts of the Santa Rosa Campus. This switch still provides phone and emergency services for over 200 endpoints.

Future Plan

Complete migration off legacy Mitel telephone system to Cisco VOIP telephone system or POTS lines as required so that the Mitel can be sunsetted by end of FY15.

Strategies/Resources

- *No further investment should be made into the Mitel system.*
- *Identify remaining digital phones and migrate to VoIP phones*
- *Identify remaining analog phones and migrate to VG appliance as allowed*
- *Identify any remaining emergency lines (fire alarm, security alarm, and elevator) and migrate to POTS lines as required. 30 x $25/month: $9000 annually.*
- *Turn off Mitel and all remote nodes.*

11.2. Voice over IP and IP Telephony

Current Environment

Voice-over-IP (VoIP) is the technology that allows users to exchange voice data over an Internet connection through their computers or telephones. To address our telephone needs now and in the future, SRJC began evaluating Voice Over IP systems in 2005. Since that time, we have settled on the CISCO VOIP system and now have over 1200 phones running on it, leaving about 100 left to migrate. The Cisco system offers many advantages: utilizes Network infrastructure (data and voice traffic over the same wires), offers high call clarity, ability to move/add/change phones in house without vendor support, ease of phone relocation by end-user, all first line support and most higher support handled by Network Technicians and Telecom Technician. Additionally, the VOIP system offers many add-on application

packages, such as Emergency Responder, which can show 911 operators the building where a call is originating from, instead of just the address of the campus calling. Video conferencing is also very seamless with the addition of a web-cam attached to a PC tied into the telephone system.

Future Plan

The Cisco call manager has now become the main system for managing voice communication. Cisco Unity has been adopted as our voice mail solution. Both of these solutions allow for a highly unified environment with our existing active directory which we should continue to take advantage of and expand as users become more comfortable with the technology. Emergency paging and emergency responder systems are both key components for emergency preparedness, and both should be implemented.

Strategies/Resources

- *Continue migration off legacy Mitel telephone system to Cisco VOIP telephone system.*
- *Implement recently purchased Paging system to allow emergency broadcast messages using VoIP phones and speakers.*
- *Expand network infrastructure to support more IP speakers in classrooms for emergency paging. 20 x $500 per speaker/network buildout. $10,000 annually.*
- *Implement Emergency Responder for all locations. Estimated cost: $60,000*

12.0. Network Security

12.1. Firewall Security

Current Environment

Santa Rosa Junior College shares a common network infrastructure that provides Local Area and Wide Area network access to instructional and operational users. For those users who come in from off-campus locations, we have a Cisco ASA 5520 firewall that filters unwanted traffic. In addition, users requiring secure resources must provide a user name and password to gain access to systems. Typically, student data, E-mail (Outlook users), and restricted data are transported in encrypted

packets. On campus users are restricted by the use of VLANs and Active Directory security groups.

Future Plan

We have recently purchased a Dell SonicWall firewall that provides a hardware redundant solution with next generation features such as intrusion prevention, malware protection and application intelligence and control. When implemented, this will greatly enhance our perimeter network security and allow for future expansion to a 10-gig backbone model. If we move our backup internet link to Petaluma to enhance our business continuity model, additional equipment will need to be purchased to maintain the same level of security for when this link becomes active in a failover situation. With the incredible expansion of mobile computing and increased demands for network access from both employees and students with their own devices, more security checkpoints are necessary to ensure the privacy of protected information housed on or servers. Additional firewalls and security appliances are necessary to meet these security needs.

Strategies/Resources

- *Implement newly purchased SonicWall firewall.*
- *Purchase additional firewall for Petaluma backup link. Estimated Cost $40,000*
- *Design and implement (if needed) separate networks for instructional users and non-instructional users. The use of a BYOD (Bring your own Device) appliance such as Cisco ISE (Identity Service Engine) could assist if we chose to implement this virtually. Estimated Cost: $ 1,300,000 over five years.*
- *Provide additional firewall to protect our most sensitive data (example: Credit Card information) every five years. Estimated Cost $40,000.*
- *Provide for replacement of primary firewall every five years. Estimated Cost $40,000.*
- *Provide security training for IT staff. Estimated annual cost: $ 4,000.*
- *Purchase network-monitoring tools. Estimated cost $ 10,000 per year.*

12.2. Physical Security

Current Environment

The core network, telephone, and data storage systems of Santa Rosa Junior College are centrally hosted at the Santa Rosa campus. All building-to-building and site-to-site connections originate in the central

data center. Due to this topology, physical security of the central facility is as critical as Network Security. Currently there are two main doors with obsolete PIN-code entry mechanisms, operating under one shared code that everyone knows. These doors provide access to the interior hallway of the data center. The entry mechanisms are approximately 30+ years old and the codes have never been changed. The doors to the data center itself are protected by standard lock and key.

Future Plan

As our reliance on computers and access to sensitive data continues to grow, our need to protect the data center from unauthorized access continues to fall under stricter guidelines. These guidelines dictate accountability measures that serve to consistently authenticate, authorize, and account for daily operations in the secure environment.

Strategies/Resources

- *Implement proximity card swipe keyless entry on data center doors, eight doors. Estimated Cost: $40,000*
- *Implement security camera system, interior data center, and seven cameras & associated storage system. Estimated Cost: $35,000*

12.3. Business Continuity

Future Plan

Develop a business continuance plan to ensure that essential functions can continue during and after a disaster. One option is to use Petaluma as a remote site to house a functional backup of our student information system and Escape system as well as other critical IT services. A backup connection to the internet would be required in Petaluma to allow for remote access in case of network failure in Santa Rosa.

Strategies/Resources

- *Purchase and build a new virtual environment for Petaluma to host backup SIS and Escape systems. Estimated cost $150,000.*
- *Move backup Gigabit connection from Santa Rosa to Petaluma for greater business continuity. Additional edge switch/router: $10,000*

13.0. Help Desk & Support Services

Current Environment

The Help Desk provides technical software, hardware, and network problem resolution to all District computer users by performing question/problem diagnosis and guiding users through step-by-step solutions from the call center. In the event that a call cannot be resolved over the phone, the Help Desk will record the call and pass a request to a Network Technician for problem resolution. Currently there is one full-time technician assigned to this task, and Network Technicians are assigned as needed.

Future Plan

The three big challenges facing this area are staffing, training, and technology. First, we need to increase the number of staff to provide dual coverage from 8 a.m. to 5 p.m. Second, we need to provide software and hardware training to the Help Desk staff so they deliver knowledgeable answers to end-user questions. Third, we need to provide new computers and software tools to improve the effectiveness of the Help Desk staff.

Strategies/Resources

- *Add one full-time equivalent Help Desk staff. Estimated Cost $58,657 annually.*
- *Provide training opportunities to Help Desk staff. Estimated Cost $3,000 annually.*
- *Purchase new Windows and Macintosh computers for Help Desk staff. Estimated cost $12,000 every three years.*
- *Purchase additional usage licenses for Help Desk Ticket tracking software. Since the re-org of IT, we have exhausted our 25 licenses, and need additional unique user IDs. Estimated Cost: $5,000.*
- *Replace existing Remote Assistance software package, LAN Desk, with Microsoft solution, SCCM. This will avoid ongoing maintenance of $6,000 for LAN Desk replacing it with the Microsoft solution, which is mostly covered under the existing Microsoft campus agreement. Estimated one-time software cost: $2,000.*

14.0. Promising New Technologies

14.1. Cloud Computing

Cloud computing is the latest "trend" in computing. We define cloud computing as remotely hosting a server and the software on that server. A simple example is Gmail. Google hosts the email software and the end users use the software through a browser interface like internet explorer on their PC. The advantages of cloud computing:

- Computer platform brand and age is irrelevant. Software is accessed via the computer's browser software. The CPU speed and age don't matter (this is why 7 year old computers don't matter). Computer brand and operating systems don't matter, e.g., users get the same interface on an Apple Mac as on a Microsoft PC, as on a Google Chromebook.
- All users get the same version of software. Every person using the remote server accesses the same version of the software, so software upgrades and patches are easy to roll out to all users simultaneously. For example, we support three versions of Outlook today: 2003, 2007, and 2010. With a server-based solution all users could only access the current version – 2010.
- Applications can be accessed anytime and anywhere - home, mobile smart phone, PC at work. Students, faculty and staff would have easier access to the suite of software used by the District without having to install and configure it on their PC, Smartphone, laptop, tablet, etc. This would reduce hardware requirements since all access is via a simple browser. An example today is using CITRIX for PRPP. All PRPP users access this application via CITRIX (a web browser interface) regardless if they are on campus or working remotely.
- Cloud hosted computing is typically a "service" model when out sourced. For example, we would only pay for the software actually used as opposed to buying and installing a dozen different programs on every PC that most users only use 6 of the 12 software programs. This would be a financial change and could enable us to better track who is using what software and assess actual usage and needs with real data. An example of this

is “Turn it In” software for plagiarism detection. We get a summary of who uses the software by user and class so we can see how we might want to spread the costs in the future.

- Lower Labor costs for SRJC. As our ability to add staff is reduced outsourcing more computer support enables us to do more with less people. For example, if we moved from Outlook Mail to Gmail we would no longer need to engage a ½ time technician to manage email SPAM or the Outlook email server.

The server that provides the software to the end users can be hosted here at the SRJC (locally) or hosted by an outside service provider like Amazon.com or Sonic.net. The outside providers can provide just the power and rack space or can provide a turnkey solution where we only pay for the software access actually used (pay per use model). The service providers could virtualize the servers or keep them stand-alone (further discussion on this later).

Some of the challenges with cloud computing:

- Backup of data: if a server is remotely hosted there is usually a fee for backup and data recovery, e.g., if we were to go to Gmail the SRJC would need to pay a monthly fee per account for backup and recovery. Estimated cost $10/user/month x 1000 users x 12 month/yr = $120,000/yr
- Communications: since the data and application are hosted remotely from the user the speed of the application is dependent on the users connection speed to the Internet. For example a low speed connection over a smart phone modem may make applications seem very slow and unresponsive. If the connection is not reliable there may be data loss. Higher speed, higher reliability connections require ongoing network infrastructure upgrades. Estimated cost: $250,000/year.
- Security: anytime data is sent from one location to another, particularly outside the SRJC network there are risks of the data being “hacked”- stolen or damaged. Adding more security will require investment in VPN software and training of users to regularly change passwords for access. Estimated cost: $100K/year.

Future Plan:
We will continue to investigate Cloud Computing options and adopt where appropriate. For example, as the computers in the Doyle and Mahoney libraries age out (Doyle computers will be 5 years old next year and roll out of warranty coverage), we will evaluate a cloud replacement approach. For the libraries this could mean continuing to use the current PCs but removing all software except the browser, disabling the USB ports (prevent students from injecting viruses) and force students to use remotely hosted versions of software like Outlook 360

(cloud-based Outlook suite) instead of software installed on each PC. Students could only save work to a remote share drive like Google Docs. This would simplify our software and hardware maintenance, reduce ongoing virus problems and extend the useful life of the existing hardware in the library at least 2-4 years.

Strategies/Resources:
Instructional Computing will work with the library staff to evaluate sever based alternatives to our traditional PC based access approach.

IT will continue to investigate cost/benefits of rolling some programs to cloud based solutions, e.g. converting our email to a cloud solution to eliminate local email servers and spam filtering.

- Data Backup Costs: $120,000/year

The network team will continue to assess and propose investment in infrastructure upgrades to support a cloud based computing approach for the libraries and large computer labs.

- Network infrastructure upgrades: $250,000/year
- Security Software upgrades: $100,000/year

14.2. Virtualization

Virtualization is using software to more efficiently manage server hardware resources. Today major applications like our email server, phone manager, personnel system, etc. are typically set up on a dedicated server per application. The server hardware is often only 20-50% utilized. By using virtualization software a group of servers, e.g., 5 servers, could host a dozen programs that used to be hosted on 12 different servers. The virtualization software also allows the resources (speed and memory) of the hardware to be dynamically allocated. For example, if SIS needs more CPU and memory access during registration the software gives SIS a higher allocation and priority so students registering see better performance. The down side to virtualization is that many software applications do not run as efficiently in a virtual mode (they hang and crash more often). Also, virtualization software is very expensive to purchase and requires staff training to learn to use it effectively. It is not clear if the extra costs of the software and ongoing training equal or exceed the savings in hardware utilization. Hardware continues to be relatively inexpensive.

Future Plan:

- There are currently at least three major virtualization software vendors: Red Hat, Microsoft and VM Ware. We need to pick one to standardize on. There is no cross compatibility between these vendors solutions.
- Once we select a vendor we need to train several technicians and start implementing on low risk applications to evaluate the actual cost benefits for the SRJC and expand as appropriate.

Strategies/Resources:

- Purchase test licenses with top three vendors for evaluation. Estimated Cost: $20,000.
- Training of network techs on virtualization. Estimated cost: $20,000/year.
- Purchase and maintenance of virtualization software: $100,000/year.

14.3. Tablet Computing

Tablet computing has been a niche of laptop type devices for several years. With the wildly successful introduction of the iPad several years ago and mobile phones becoming bigger, tablet computing has been growing very rapidly. In addition to the iPad there are a growing number of competing Windows based tablets that run the Windows OS. At this time the SRJC has purchased hundreds of iPads for student programs and have several in the library for student check out and available at the IT help desk for staff to check out. These devices currently are not robust enough to be enterprise devices, e.g., replacements for a laptop or PC. We therefore do not support the purchase of these devices as a primary computer for employees. We also do not officially support employee owned or categorical fund purchased tablets. However, we do allow them to have limited connectivity to our network similar to what we allow for user owned smart phones.

Future Plan:

- Continue to monitor evolution of tablet computing. We will watch the usage of the existing iPads. Currently the iPads are approaching the cost of a laptop and if they continue to improve in performance will become an alternative to a laptop for students and employees.
- Today tablet PCs are typically a much more expensive hardware platform than a standard laptop or PC with no significant benefits to the education of our students. This could change in the future if more users adopt tablet computing reducing the hardware and software costs and increasing the reliability and ease of support of the software.

Strategies/Resources:

- Continue to monitor new product offerings- software and hardware.
- Purchase sample new tablets for testing if appropriate: $2,000/year.

14.4. Social Networking

Most of our student body uses social networking sites on a daily basis. These sites are becoming the primary interface of many students to each other and other institutions they interact with- stores, agencies and hopefully the SRJC too. We need to monitor how best to engage in using Social Media to help enhance the SRJC brand to continue to attract and retain more students. We also need to use Social Media to help us more effectively educate our students and communicate more efficiently with students, staff and faculty.

Future plan:

- Hire a web master to be the District owner of Social Networking best practices and policies. This person would be responsible for developing acceptable use guidelines, helping train faculty and staff to use Social Media and provide policies on legal issues like FERPA, student privacy, and 508 disability access compliance. Estimated cost: $120,000/year
- Continue to monitor the evolution of Social Media and provide links to major sites for all classes and programs via Moodle.

Strategies/Resources:

- Web Master: $120,000/year.
- Moodle links to major social media sites maintained by Distance Ed.

14.5. Mobile Devices

Wireless devices are becoming ubiquitous on campus. Students in the library today often have two to three wireless devices simultaneously connected to the wireless access points. For example, over 50% of our students now have Smart Phones with WiFi capability and laptops with WiFi capability that they use daily in the library and any other WiFi enabled hot spot they can find on campus. We are seeing geometric growth in the use of our wireless access points.

Future plan:

- Restrict Access to Authorized Users- we are working on requiring users to authenticate that they are an SRJC student, faculty or staff member to use our wireless access points. This will reduce non-authorized usage.
- Restrict the amount of bandwidth an individual can use at one time. We are using CISCO software to monitor wireless usage and if we see large downloads like movies we restrict the bandwidth allocated to that user so other users are not compromised.
- Expand network infrastructure to support more wireless devices.

Strategies/Resources:

- CISCO Software to monitor and manage access: $20,000/year.
- Ongoing infrastructure investments: $50,000/year.

14.6. Energy Conservation

The SRJC board of directors signed the Talloires agreement several years ago and has sustainability as a key strategic plan objective which mandates the SRJC proactively reduce our carbon footprint and energy usage. The largest single energy use point on campus is likely our central server room where a great deal of energy is consumed to power the servers and the HVAC to control the environment in the room. Wireless routers throughout the District are also large energy use devices. Printing is also a major source of power consumption from the printers and waste (toxic ink) and paper.

Future plan:

- Work with Facilities Operations to quantify actual energy usage and energy reduction options. For example, PG&E has a program to help fund some energy improvements to reduce energy consumption.
- Work with users to turn off computers when not being used.
- Purchase energy star rated equipment going forward.
- Investigate outsourcing and virtualization to reduce server power consumption.
- Continue working with Students, Faculty and Staff to reduce printing, especially color printing, and wherever possible, go paperless.
- Investigate and implement more internet connected energy management systems to reduce energy consumption in the District.

Strategies/Resources:

- Staff members to investigate energy savings: .5 network tech, $50,000/year.
- Increased cost for energy star compliant equipment: $20,000/year.
- Purchase/lease of multi-function devices that are shared and centralized to enable easy scanning and sharing of documents and tracking and billing of printing back to Departments (accountability). Estimated Cost: $100,000/year.

15.0. Student Information System (SIS)

Current Environment

The current Santa Rosa Junior College Student Information System (SIS) is a homegrown student information and administrative system that is built on a decades old design (Schooling COBOL system developed in the early 1980s). The first generation COBOL Schooling system replaced paper registration systems and was adopted by over 20 colleges in the state in the 1980's. However, commercial vendors developed more full featured products in the late 1990's and by 2009 only three schools were left using the Schooling system and one of those, Pasadena, converted to Banner in 2012 and Monterey is looking at abandoning the Schooling system as soon as they can get funding. The old COBOL system was redeveloped using VB.NET and released in 2009, leaving the SRJC to shoulder all development and support costs as the sole user. The new SIS was not architected to be mobile friendly and is a stand-alone system. New SIS systems typically integrate Finance, Human Resources, Student Information, and often the online Learning Management System. These integrated systems enable dashboards, use of data analytics to do predictive modeling, are designed to be easy to modify, scale up or down and be mobile compatible. The incoming SRJC students are expecting a mobile friendly, integrated user experience one similar to the applications they use every day, such as Gmail, Amazon.com, etc. They register and access their student information most often with mobile devices like smart phones, laptops and tablets.

Future Plan

To purchase a Student Information System that seamlessly integrates Human Capital Management, Financial Management, Data Analytics, and Student Cloud based applications designed for the way people want to work today. This new Student Information System would be designed for mobile use first and deliver constant, predictable, and easily consumable enhancements and functionality and significantly aid in student success. This would include self service capability, predictive analytics, retention alerts, portfolios, and executive dashboards to give the college a system of record, system of engagement, and a strong analytic foundation. It will simplify service and communication across campus, helping to recruit, admit, award, enroll, bill, advise, and retain students.

In addition, this new system would provide the following:

- Improved Scheduling accuracy and ensure compliance to State Education code.

- Accurate Pay card system to ensure Faculty are scheduled and paid correctly for the classes that they teach.
- Students will be able to easily search for classes, register, and pay fees.
- Access to the student portal, registration, schedule of classes, and educational planning (Degree audit) will be easy to use and mobile friendly.
- Credit card payments will be reliable, and easy to use.
- Student and Faculty data will be easily accessible to Human Resources, Accounting, Payroll, and business services.
- State reporting (MIS) will be consistent and manageable.
- Enrollment planning will be relatively accurate and allow the college to properly schedule the right type and amount of classes to meet the students' needs and allow them to be more successfully and improve college (FTES and FTEF) efficiency.
- Secure encrypted data management
- Business continuity- data recovery and restoration plan in case of a man made or natural disaster.
- Reporting- dashboards for faculty, staff and administrators for the data they are responsible for, e.g., SLO's, Expenses relative to budget, Evaluations, etc.
- Changes- system is flexible to be modified to accommodate evolving state reporting requirements
- Data Analytics- system data can be used to do planning and predictive modeling to prepare multiple enrollment and funding models
- Scalable- system can be expanded or contracted relative to enrollment
- Regulatory compliance- FERPA, HIPPA, 508, PCI, etc.

Strategies/Resources

- *Purchase a new integrated SIS, HCM, Data Analytics, and Financial System. Estimated initial Cost $20,000,000. $500,000 annually for subscription service/maintenance cost.*
- *Purchase integration services. Estimated Cost $5,000,000.*
- *Use existing Programmer Analyst staff for data integration into the new system and data extraction for custom applications and reports.*

16.0. Community Education Information System

Current Environment

Community Education currently uses SRJC's Student Information System (SIS) as its student information system. SIS was created internally in the 1980s and now decades later, does not offer features that Community Education student expect; a student who shops at Amazon.com, Zappos.com and is expecting a modern user experience – one similar to the applications they use every day in platforms accessible on a smartphone, tablet or Kindle. The online registration challenge has also been an environmental challenge as well, because students can't shop (or in this case sign up for classes) from the comfort of home, they have to drive to Santa Rosa to register in person. This unnecessary trip to the college also has to be made within business hours of Monday to Friday when the office is open. This also increase the need for front office staff and increases the labor costs of Community Education.

Some specific problems that are experienced with SIS include:

- The system is slow
- It crashes often – providing an unpleasant "shopping" experience
- Special characters in class descriptions are changed into symbols when extracting and placing in the bulletin
- We cannot change program functions ourselves, e.g. get information such as instructor names printed on receipts, or extracts to include more information
- During peak registration times, the system is made slower by connection to the credit registration system
- We have to go through A&R to make major student changes, e.g. edit incorrect birthdates, names, duplicate accounts
- It is tailored more for credit courses, so does not meet Community Education needs
- The current ID/PIN system is difficult for students to remember
- Current issues prevent students from signing up at home and require them to make unnecessary trips to the JC during business hours.

Future Plan

To purchase a system that is more than a registration program; that is flexible and can be modified to accommodate evolving department and customer needs; that has a secured encrypted system, and servers hosted in a secured data center.

Ideally a new system would provide the following features for students:

- Easy navigation for students to find classes, register, and pay fees.
- Communication between instructors and students and Community Education
- Use a username/password system that is easier for students to remember
- Allow students mobile access to see announcements, enroll, etc
- Add customized information to class pages (Instructor email, schedule comments, supply lists)
- Have a staff/instructor directory, for students to contact instructors before registration for questions about class content
- A "conversation room" for students in the same class to chat
- Mobile access

Ideally, a new system would provide Community Education the ability to:

- Edit student information without going through A&R
- Customize receipts, class details, student accounts, etc.
- Eliminate system slow down during heavy periods of credit class registrations
- Make certificates, place videos online
- Expand search capabilities, e.g. beyond a semester, search by key word
- Block duplicate accounts from being created and minors from registering
- Tailor rosters to include student email addresses
- Customize and maintain our own website
- Integrate with Moodle
- Send messages to mobile phones, landline phones and email addresses

Strategies/Resources

- Purchase a new website/student information system. There are two potential vendors. For budget planning purposes, the highest cost is estimated at: $20,000 for the initial cost, plus $4,000 for annual maintenance and $10-20,000 for annual contract training components (optional).
- There will be a cost saving to Community Education, allowing it to become more efficiently funded. Community Education staff will not be hand processing registrations and payments as well as taking phone registrations. This process will allow the department to decrease its STNC needs during peak registration.
- Community Education will reduce the support it requires from IT and A&R staff, saving the district funds as well.