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Section I

Executive Summary
Executive Summary
The Rancho Santiago Community College District (RSCCD) Strategic Technology Plan is a dynamic document that is reviewed and revised annually in order to respond to rapid changes in technology. The Strategic Technology Plan is a collaborative project developed by the Technology Advisory Group, which includes representatives from Santa Ana College (credit and non-credit), Santiago Canyon College (credit and non-credit) and the District Office.

The plan’s intention is to unify goals into one central document as they relate to technology, including those of the colleges’, as well as of the district Information Technology Services Office. Primarily, this document outlines the assumptions made during the committee’s planning process and describes the broad areas of technology.

2009-2010 Accomplishments
Over the past year, the Information Technology Services and the Technology Advisory Committee, with the support of Santa Ana College and Santiago Canyon College, has:

✓ Completed the implementation of a new VoIP phone system.
✓ Performed pilot testing of software and testing of techniques to distribute software to encourage the use of media to enhance curriculum.
✓ Purchased and implemented a new disc-to-disc backup solution laying the foundation for a dual location disaster recovery plan.
✓ Increased our enterprise storage system from 30TB to 40TB.
✓ Re-wired buildings A, B, and D at Santiago Canyon College.
✓ Installed an email and shared document archival appliance to meet the eDiscovery requirements.
✓ Purchased equipment, with the savings gained from the terminated mainframe maintenance cost, to support the colleges:
  o Experimenting with “green” technologies
  o New computers for classrooms and laboratories.
  o New projectors either to replace aging projectors or to add new ones to existing classrooms.
✓ Transitioned to Datatel and WebAdvisor to support student and business needs.
✓ Transitioned to CI Track to track attendance for both college credit and non credit.
✓ Transitioned SCC’s website to a Sharepoint based product from Sector Point.
✓ Transitioned to Official Payments for online payment of college credit and community services tuition.
✓ Implemented Datatel’s State Chancellor’s MIS and 320 reporting.
✓ Implemented the Orange County Department of Education system to track leave benefits.
✓ Customized Datatel’s faculty assignment module to better manage assignments and produce auditable reports for Payroll.
✓ Provided connectivity from Datatel to Research Data Warehouse and Educational Student Plan services.
The Fiscal Plan for 2010-2011

Network, Infrastructure, and Cable Plant
- Upgrade to Exchange 2010
- Develop a plan to replace the wireless system at SAC, which will become the standard for all locations
- Replace network equipment according to the recommended refresh cycle
- Replace the remote system
- Begin developing a business resumption plan
- Implement a single sign-on methodology

Computers and Projectors
- Replace computers, servers, and printers according to the recommended refresh cycle
- Replace classroom projectors according to the refresh cycle

Enterprise Resource Planning
- Implement a document imaging solution for financial aid
- Implement a bookstore voucher system
- Create joint faculty committee for WebAdvisor modifications
- Implement authentications for iTunes University
- Transition SAC and the District’s websites to a SharePoint based product from Sector Point.

Training and helpdesk support
- Begin to develop a strategy for training and helpdesk support.

Plan for 2-5 years
- Develop a strategy for faculty development.
- Develop a strategy identifying needs and solutions for a web content management solution, portal, and a digital asset manager
- Upgrade to the latest version of Blackboard
Section II

Strategic Technology Plan
I. Introduction

The Rancho Santiago Community College District (RSCCD) Strategic Technology Plan (STP) is a collaboration of the District Operations Center (DOC), Santa Ana College (SAC) and Santiago Canyon College (SCC). The current plan was written by members of the Technology Advisory Group (TAG). Through weekly meetings and collaborative research, the plan was completed in April, 2010. Each member of TAG participated in the development of this plan, providing valuable input in their area of expertise. Also, considerable effort was made to align the STP with the colleges’ educational mission to optimize technology for student learning and promote successful student outcomes.

The STP shall remain a "living document" that is reviewed and updated periodically and used as an assessment guide for current and future technology needs at the colleges and within the district. A copy of the plan will be submitted by TAG to the SAC and SCC college councils, advisory committees and to the RSCCD Chancellor’s Cabinet to update the committees on the technology implementation milestones achieved, as well as the technology challenges that face the colleges and district.

With the amount of technology information rapidly changing, the RSCCD recognizes the importance technology plays in the lives of its students and employees. Because information and communications technologies serve as the basis for influencing how people work, learn, communicate and do business, RSCCD is constantly evaluating and strategizing cost-effective ways to meet the technology expectations and demands of its students and workforce while being mindful of its budget.

The purpose of the STP is to serve as a benchmark for information and communication technologies currently being used throughout the district. This benchmark will be used to establish technology guidelines, standards and policies that will help guide the DOC, SAC, SCC and the college’s non-credit educational centers, Centennial Education Center (CEC) and Orange Education Center (OEC), respond to the future technological needs of their faculty, staff and students. The plan, however, remains flexible to accommodate rapidly evolving technology and funding issues that may face the colleges and/or district.

The STP also includes administrative procedures and recommendations that need to be followed in order for the colleges and district to maintain the students and employees expectations for technology. These procedures and recommendations outline the budgetary requirements required to maintain currency in technology and infrastructure. The plan includes future staffing needs that require consideration to support the Colleges’ growth in technology.

Another purpose of the STP is to create alignment between SAC and SCC’s technology plans, along with the California Community Colleges (CCC) Technology III Plan (2007-2010).

II. Planning Elements

A. Technology Advisory Group (TAG)

In Fall 2007, RSCCD established a district Technology Advisory Group (TAG) that meets once a month to discuss, evaluate, recommend and share information and ideas related to the information and communication technologies used within the district.
Members of TAG include administrators, faculty and classified staff from both colleges and the district offices who are immersed in the implementation of technology or oversee technology functions as a part of their regular job. Current TAG members include:

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosi Enriquez</td>
<td>Faculty – SCC</td>
</tr>
<tr>
<td>Norm Fujimoto</td>
<td>Administration – SAC</td>
</tr>
<tr>
<td>Mary Halvorson</td>
<td>Administration – SCC</td>
</tr>
<tr>
<td>Raymond Hicks</td>
<td>Faculty – SAC</td>
</tr>
<tr>
<td>Scott James</td>
<td>Classified – SCC</td>
</tr>
<tr>
<td>Sylvia LeTourneau</td>
<td>Administration – DOC</td>
</tr>
<tr>
<td>Roy Shahbazian</td>
<td>Faculty – SAC</td>
</tr>
<tr>
<td>Joe Pacino</td>
<td>Classified – SAC</td>
</tr>
<tr>
<td>Sergio Sotelo</td>
<td>Administration - CEC</td>
</tr>
<tr>
<td>Jose Vargas</td>
<td>Administration – OEC</td>
</tr>
<tr>
<td>John Weispfenning</td>
<td>Administration – SCC</td>
</tr>
</tbody>
</table>

* Committee chair

**TAG Vision**

To advance the operational efficiency and optimize student learning through technology.

**TAG Mission**

To support district and college associated committees, groups and departments by coordinating technology requests, supporting the development of technology policies and procedures, and promoting student learning through technology.

Any technology recommendation or decision made by TAG is forwarded to RSCCD’s Chancellor’s Cabinet for approval.

**B. Information Technology Services (ITS) Structure**

RSCCD maintains a centralized and collaborative Information Technology Services (ITS) department led by the Assistant Vice Chancellor. One of the primary missions of ITS, is to provide its students and employees with quality technology services and systems that foster learning, productivity and collaboration.

The majority of ITS systems and services are centrally run from the DOC, but the department provides technical services and staffing to SAC, SCC and all of the educational centers and training sites within the district. ITS is responsible for operating and maintaining the physical infrastructure required to service the district’s computer and telephone networks. The department also oversees the core business and communication systems that include email, telephone, student information, financial, and human resources.

The department is divided into four areas, which include Application Systems, Network Administration and Academic Support departments at SAC and SCC. Below is a list of services and responsibilities provided district wide by the individual ITS departments:
Application Systems
- Manage and integrate Enterprise Resource Planning (ERP) Systems
- Evaluate and integrate third party vendor functionality into ERP
- Provide State MIS Reporting systems and services
- Maintain RSCCD Research data warehouse
- Provide and maintain internal web/intranet/portal systems and services

Network Administration
- Host and maintain application servers
- Host and maintain enterprise storage systems
- Design, implement and maintain network and infrastructure equipment
- Develop strategies to manage network growth and internet bandwidth usage
- Develop mechanisms that provide a safe and reliable network (e.g. firewalls, antivirus, intrusion systems)
- Perform backups of enterprise data
- Maintain telecommunication system
- Maintain physical cable plant

Academic Support
- Provide site-licensed operating system and business application software
- Install instructional software and equipment for faculty
- Procure and maintain academic servers
- Provide technical expertise of hardware/software specifications to colleges that meet district standards and instructional requirements
- Develop system and maintains instructional inventory of hardware and software
- Develop effective system in deploying, maintaining and monitoring classroom equipment and software
- Provide technical assistance to faculty, staff, and students on an as-needed basis
- Procure and maintain college computers, servers and printers
- Collaborate with Media Systems department to support classrooms

C. Guiding Principles for Technology
If RSCCD is to be successful in implementing its vision of technology and accomplishing its strategic goals, it is important for TAG to create a list of guiding principles that will define and direct the criteria for decision making in regards to purchasing and using information technology.

Below is a list of TAG’s guiding principles:
- Our colleges strive to provide leadership in technology for the communities they serve.
- Students and the community deserve the best technology that is available.
- Technology can enhance RSCCD’s ability to provide multiple modes of access and a consistent delivery of all services.
- Continuous assessment of technology services is vital for ongoing improvement.
- Critical district wide services/data must be standards-based, reliable and secure.
- Ease-of-use must be a factor in selecting and implementing new technology.
- Intra-district communication is a mission-critical element.
- Technology planning must be a major factor in local and district wide funding decisions.
- Funding for the development and upgrading of infrastructure must be considered in the budgeting process
- ITS provides a district wide coordinating function.
The integrity of data must be assured and safeguarded.  
Staffing should increase in proportion to the implementation and application needs of technology.

D. Assumptions
A primary reason that TAG has developed the STP is to insure that RSCCD looks to the future and develops progressive learning and working environments for its students and employees in order to foster positive student learning outcomes through the use of technology. Below is a list of planning assumptions developed based upon the input provided by members of TAG. The assumptions include the current internal and external environmental factors that affect the development and implementation of STP. As assumptions change, the STP is to be modified accordingly. Therefore, an annual review of the STP will occur.

Student Assumptions:
- Students need access to resources and services at any time from any location.  
- Student expectations and skills vary widely but are generally increasing.  
- All electronic instructional materials and services meet or exceed Americans with Disabilities Act accessibility guidelines.  
- Technology supports successful instruction.  
- Technology is similar to and at relative parity with other local colleges.

Employee Assumptions:
- Faculty members expect current technology to support and enhance instruction.  
- Technology requires more specialized staffing.  
- Technology requires continuous employee training.  
- Technology redefines work culture and environment.  
- Staff development and communication is dependent on technology.

Support Assumptions:
- District wide technology cooperation will become increasingly critical.  
- The demand for general technology support and adaptive technology support will continue to increase.  
- Assess technology to assure the Americans with Disabilities (ADA) Act Standards are being met.  
- Continually evaluate technology to improve and streamline business processes.  
- Meet the growing demand for emerging technologies.  
- Employ the most highly qualified technical support staff possible.

Resource Assumptions:
- The need for technology will always be greater than the resources provided.  
- Due to the extreme budget crisis, the funds allocated for technology enhancements may be reduced.  
- Federal stimulus money may be available for infrastructure updates and expansion.  
- In order to make the most effective use of resources, a coordinated plan (like the STP) is needed for the design, deployment and use of technology.

General Assumptions:
- Demand for electronic access and communication will increase.  
- Technology-related costs will continue to increase.  
- A balance between a secure and service-oriented environment will be provided.  
- Security will become more important for data integrity.
- Continuous updates in infrastructure, hardware and software will be provided.
- Reliance on the internet to accomplish essential functions will increase.
- Our electronic communication includes email, internet, intranet, mobile phones, PDAs, telephone conferencing, videoconferencing, wireless and remote access.
- New and easy-to-use technology will be implemented for all employees.

E. Assessment of Technology
Incorporating an assessment process into the STP fosters a more collaborative environment between the district and the colleges, creating an atmosphere where new technology and ideas can be presented and discussed. The results of technology sharing will continually help TAG develop a centralized process for managing innovation, implementing new ideas in technology, and evaluating its current technology standards.

A key component of the plan is imbedding a mechanism to evaluate and assess its purpose. On a regular basis, information is gathered through our research department, surveys, focus groups, managerial reviews, professional observations, program reviews, faculty/department advisory groups, and planning portfolios to help TAG evaluate and prioritize the technology needs of the district and colleges in order to allocate resources appropriately, better serving students and employees.

F. Resource planning and obsolescence
The development of technology standards and a centralized planning process allows TAG to be mindful of its budgets for future technology. With the regular assessment of technology incorporated into the STP, TAG plans and develops yearly timelines to coordinate the replacement and reallocation of computers, software, and hardware that have become obsolete.

III. Standards
Creating technology standards allows the district to consolidate and streamline business processes, leverage its buying power, and provide better support and training. The district recognizes the importance of allowing flexibility to create collaborative environments among its faculty and staff to explore new technologies that could benefit departments, programs, colleges or the district as a whole.

A. Network Infrastructure
One of the biggest challenges an educational institution faces is managing and maintaining its IT network infrastructure. The challenge also holds true for RSCCD, where demands, both internal and external, continue to increase as more administrative functions and business processes are automated or web-based. A secure, reliable, 24/7 connection to the district network and internet is a necessity. It is also important for the network infrastructure to be designed in a way that allows for scalability and growth. The district is mindful of its resources and continues to look for ways to maintain its network resources in a responsible manner, and it adopts proven technology rather than base its infrastructure on the latest fad.

RSCCD’s network infrastructure is based on CISCO equipment, which manages the network traffic between the district operations center, colleges, and educational centers over a redundant gigaman connection and fiber backbone. An industry-accepted network management tool monitors RSCCD’s equipment health, including traffic collisions, hardware outages, and application failures.
RSCCD’s connection to the World Wide Web (WWW) is provided by the Corporation for Educational Network Initiatives in California (CENIC), which provides network connectivity to educational campuses statewide.

RSCCD is moving toward a “Same Sign On” strategy, which will use its existing Active Directory (AD) system for authentication for services that primarily involve its employees, such as for email. Services for students, like Blackboard and WebAdvisor, use the Lightweight Directory Access Protocol (LDAP) system. Once the “Same Sign On” capacity is in place, all passwords will be changed in one place for all corresponding services simultaneously, then encrypted, and stored in both authentication systems.

Offering wireless access to the district and college networks is increasingly important as more mobile devices and laptop computers are used as learning tools, by faculty, staff, and students. Accessibility to a secure wireless connection will continue to expand in public areas, WI-FI hot spots, academic classrooms and other venues, such as the library, athletic fields, and administrative buildings as budget allows.

Centralized services provided by the Network team within ITS include:

**Email**—the email infrastructure is based on Microsoft Exchange 2003 which resides on a cluster of servers running Windows 2003. This system currently supports full-time faculty, staff and part-time instructors, which is approximately 4000 accounts. We also maintain gateway servers to ward off spam and viruses.

**Remote**—the district provides remote access through dedicated remote access appliances which provide a secure tunnel from the end-user to the district. With remote access, an employee gains a secure access to email, private directories, district intranet, etc.

**Servers/Virtual Servers**—the district maintains over 100 servers, both physical and virtual. As new systems are required, ITS determines if the server requires a virtual or physical solution. Virtualization saves power and space, while providing flexibility to meet users’ demands. A routine patch schedule exists that coincides with Microsoft’s “patch Tuesday” to keep current with the latest security updates and threat protection. In addition, the district maintains several Linux servers.

**Centralized Storage**—the district’s centralized storage solution is comprised of both storage area network (SAN) and network attached storage (NAS) solutions. As the systems grow, ITS evaluates which systems fit best on either the SAN or NAS in order to centralize storage and backup. All are backed up on a virtual tape system, as well as on a physical tape system. Since these solutions house our enterprise data, the backups include an offsite storage rotation.

**Antivirus/spyware**—The antivirus and firewall product Symantec End Point is leveled at centrally managed environments to protect servers and workstations. ITS uses an antivirus server that monitors client workstations for threats and notifies the network team of viruses to be eliminated. If a serious threat arises, ITS has the ability to take immediate action to shut down individual work stations to prevent further infection.

**Telecommunications**— In summer 2009, RSCCD implemented a new Voice over Internet Protocol (VOIP) system from CISCO. Their product, Cisco Unified Communications Manager (CUCM) is an enterprise-class IP telephone call processing system that provides traditional telephony features, as well as advance capabilities, such as mobility, presence, preference, and rich conferencing services. The new system replaces the old PBX and Centrex systems, reducing monthly costs.

At a minimum, the supporting electronics are on the following replacement cycle:
### Equipment Type Replacement Cycle

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Replacement Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core/Backbone</td>
<td>10 years</td>
</tr>
<tr>
<td>IDF</td>
<td>5 years</td>
</tr>
<tr>
<td>Edge</td>
<td>0 year</td>
</tr>
<tr>
<td>Wireless</td>
<td>5 years</td>
</tr>
<tr>
<td>SAN/NAS</td>
<td>5 years plus growth</td>
</tr>
<tr>
<td>Physical layer—Project based</td>
<td>15 years minimum</td>
</tr>
<tr>
<td>Call Manager</td>
<td>5 years</td>
</tr>
</tbody>
</table>

### B. Computers

Generally a computer user falls into one of three types: Heavy, Moderate, or Light. Determining a user type depends on two key factors: how computation intensive a task will be, and how quickly the task must be executed.

**Heavy users**
- Require computers to have fast and reliable processors to complete timely tasks.
- Require computers with large amounts of memory to run one or multiple applications at once.
- Use their computers more than 75 percent of the time.

Examples of a heavy user include, but are not limited to: jobs/tasks that are graphic or computation intensive in nature, such as graphic design, CAD/CAM, and business and computer classes.

**Moderate users**
- Require computers that have average to above average processors to perform their daily tasks.
- Require computers that have average to above average amounts of memory to run one or multiple applications at once.

Examples of a moderate user include, but are not limited to: jobs/tasks that are somewhat graphic, computationally intensive, very graphic, or computation intensive, but not very time sensitive, such as everyday office tasks. The majority of academic computers, placed in classrooms and labs, and employee computers fall into this category.

**Light users**
- Require computers that have average processors to perform their daily tasks.
- Require computers that have average amounts of memory to run one or multiple applications at once.
- Light users tasks are not graphic, computation intensive or time sensitive in nature.

Examples of a light user include, but are not limited to: jobs that require access to the internet and tasks such as word processing, spreadsheet calculations, and basic database management. Additionally, it includes all computers used for basic functions, such as registering for classes online.

The useful life of equipment for heavy users is the shortest, followed by moderate users, and then by light users, which have the longest useful life. Because of this, equipment that is no longer suitable for the heavy users’ high need for computing power may still be serviceable for the moderate or light users’ lesser needs for computing power, and therefore can be recycled.

Establishing life cycles for technology helps the district to determine what equipment is obsolete or nearing the end of its service life, requiring its replacement. A comprehensive technology life cycle policy enables the college to predict costs and use funds more efficiently.
There are three main technologies with defined life cycles:
- Computers with monitors – Academic & Administrative
- Network Printers – Academic & Administrative
- Servers – Academic & Administrative

In order to define a life cycle for a given technology, both the service life and the useful life of the technology must be considered. Service life is the amount of time that the technology typically lasts before requiring maintenance and repairs beyond its value. Useful life of the technology is the amount of time before the technology is rendered obsolete by advances in that technology. Useful life, unlike service life, is a floating value determined primarily by the users’ needs.

Because the useful life of technology is determined by the users’ needs, equipment that is no longer useful to a user with heavy demands may be useful to another user with lesser demands. This means it is possible to redeploy technology that is obsolete in one role into another role where it is still useful. By redeploying old technology, significant cost saving can be realized.

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Maximum Service Life</th>
<th>Maximum Useful Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computers with monitors</td>
<td>6 Years</td>
<td>3 Years – Heavy Users</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 Years – Moderate Users</td>
</tr>
<tr>
<td>Network Printers – Academic &amp; Administrative</td>
<td>6 Years</td>
<td>5 Years</td>
</tr>
<tr>
<td>Servers</td>
<td>5 Years</td>
<td>4 Years</td>
</tr>
</tbody>
</table>

C. Media Services
Media Services serves two primary purposes with each college managing the operation differently.

- Media Production develops and creates audio, video, PowerPoint slides, rich media, and web presentation for faculty. Training of faculty and staff is included in their responsibilities.
- Media Systems provides support of Audio Visual (AV) equipment. This includes checkout of equipment, such as digital cameras, laptops, portable projectors and other related AV equipment. Upon request, they may deliver and/or setup equipment for classrooms instruction and special events. They provide requirements for classroom mediation and work with vendors to install equipment.

Media Services and Academic Support work together to assess the classroom needs before purchases of media equipment. During installation, they continue to work together, to ensure all components operate correctly.

The following items are considered and discussed when mediating a district facility or classroom:

- Functionality
- Future capability
- Current equipment
• Room layout
• Lighting
• Sound
• Electrical outlets—ceiling and wall or floor
• Network Access and includes wireless

While the majority of the SAC and SCC classrooms are mediated, the district is continually working toward complete mediation of all classrooms on the college campuses. Mediation has become an important element in the faculty’s teaching practices, and the colleges have recognized the importance of classroom mediation. Therefore, media needs will be identified and subsequent installation required, consisting of a network jack, a projector placement and an instructor station, in all future classroom building construction.

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Maximum Service Life</th>
<th>Maximum Useful Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projectors</td>
<td>6 Years</td>
<td>5 Years</td>
</tr>
</tbody>
</table>

D. Software

Most employee computers run on the Windows operating system and feature Microsoft Office Suite, which includes Excel, Word, PowerPoint and Outlook, for daily computing needs since it is the most widely used set of programs in business and industry and considered the de-facto standard. Outlook is used for district email, professional contact information, and managing one’s schedule and task list. Every user’s Outlook is configured to connect with the back end server (exchange) that stores users’ data. The server is backed up routinely, and staff can access their data from anywhere using the district remote access (remote.rsccd.org).

The two academic computing staffs in conjunction with the network staff have agreed on a core set of software in order to minimize any configuration collisions. The core software is funded by ITS, and as updates are released, the academic computing staff, with input from the colleges and coordination with the network staff, develop a plan to install the latest versions. Essentially, the updating process consists of three factors: First, if the curriculum demands the newest version, then academic labs and their associated faculty will receive the updated software. Second, the newest software versions will be the standard on all new computers. Finally, faculty and staff needs will be evaluated to determine if their computers need the updated software.

A summary of the “core” set of software programs as defined by the colleges’ Academic Computing Directors and the Networking Department are:

• Operating System
• Internet Explorer
• Microsoft Office
• Datatel - Staff
• Adobe Reader
• Apple Quick Time Player
• Windows Real Player
• Flash

Other applications included on every computer are the free web programs: Adobe Reader, Apple Quick Time Player, Windows Real Player, Flash and Internet Explorer (IE) for web browsing.
Academic departments purchase necessary licenses for specialized software outside the core standard software. Academic Support will install the software on the required computers.

Although the Windows operating system is installed on the majority of computers district wide, ITS supports Macintosh computers used for specific work or academic environments, such as publishing and professional video production. It is appropriate for students interested in these professional fields to learn the Macintosh operating system and its applications in order to prepare for successful careers.

IV. Technology and Instruction

In regards to the changing technology and the gap in faculty knowledge of these new technologies, the colleges and ITS frequently receive requests to purchase or provide technology/software so that faculty can enhance instruction. Some of the requested technologies have stabilized, some are older technologies not worthy of support, and some are so new they need to be researched. TAG has the responsibility to wade through these issues to appropriately promote technology in the classroom and online instruction. ITS is committed to support and promote the technologies researched and recommended by TAG.

Under the direction of the colleges’ Offices of Distance Education, ITS supports the Blackboard system. However, TAG and ITS recognize and respect that the curriculum developed using these technologies are solely managed by the colleges.

V. ERP Systems

According to the California Community Colleges Technology III plan, “Enterprise Resource Planning (ERP) systems integrate, or attempt to integrate, all data and processes of an organization into a unified system. A typical ERP system will use multiple components of computer software and hardware to achieve the integration.” This has proven true at RSCCD in that we have several software and hardware systems that comprise our ERP.

Datatel—Fully integrated solutions for Admissions and Records, Financial Aid, Financials, and Human resources. These solutions leverage the same comprehensive data to maximize departmental efficiencies by improving departmental workflows, business processes, productivity, and efficiency across the entire district. Datatel is comprised of several unix and windows servers, providing “near” 24/7 access via the WebAdvisor product.

Blackboard—designed to meet the needs of both students and faculty to work inside and outside the classroom in ways that make sense to learning. The Blackboard solution is used for our on-line curriculum, hybrid sections, and as supplemental to the traditional “brick-and-mortar” classes. The district has chosen to have Blackboard host this solution. Information is ported from Datatel to the Blackboard system.

OCDE—Orange County Department of Education (OCDE) houses our payroll system which includes entering position and related pay for employees, tracking leave accrual and usage, and tracking timesheet hours.

CurricuNet—designed to automate the entire process of submitting course and program proposals to the State Chancellor’s Office via the web providing a streamlined process for a cumbersome process. Once
Course descriptions are approved by the State, they are then imported into Datatel. CurricuNet holds the history while Datatel holds the current descriptions.

**CCC Apply**—Our online application solution was product developed by XAP corporation with the support of the State Chancellor’s Office and used by many of the California Community Colleges. Datatel has an integration solution to import the data into Datatel.

**Astra Schedule**—an interactive scheduling system that assists coordination of academic, event, and resource scheduling functions.

**CI Track**—An attendance tracking system to track the time students spend in open-entry/opend exit labs, tutoring centers, fitness centers, and Math labs, English labs, and computer labs.

These solutions contain the mission critical data for the entire district, therefore it is imperative that both the software and hardware are up-to-date, tested, and patched, and that the hardware is budgeted to rely on growth and upgrades.

With the implementation of Datatel, a committee of individuals from key departments was formed to test patches to these systems. With the software so tightly integrated, if a patch was not tested, the error will have a rippling effect, traveling through all the systems. Patches are loaded into a test environment on a monthly basis. This team tests patches and gives the approval to move patches into the production environment. This process is scheduled to occur monthly so the district does not fall behind on patches.

When there are patches to the operating system these solutions run on, they are first certified by the vendor. For example, if Oracle or HP updates their software, Datatel will first certify that their software has been tested on the new platform, then ITS will ask the committee to perform its tests. Once the committee is satisfied and has given ITS approval, the new operating system patches are moved into the production environment.

**VI. Web Presence**

The district is represented on the internet by three main web sites and a series of niche web sites that are department or division specific. The majority of these sites are created, maintained and hosted on district servers. RSCCD also hosts two intranets for employee communication.

**External Sites**

RSCCD’s three main external web sites include the district (www.rsccd.edu), SAC (www.sac.edu) and SCC (www.sccollege.edu). Each web site has its own distinct design, features location specific information and is maintained by content managers who use various content management systems to keep the web site’s information current. Both SAC and SCC have established web committees, made up of administrators, faculty and staff, who meet regularly to review content, brainstorm and discuss web site enhancements and troubleshoot technical issues that affect the web site.

The RSCCD web site is maintained by a group of content managers from the different departments featured on the web site. The district does not have an established web site committee, but major changes or upgrades to the web site are done in collaboration between ITS and the district’s Public Affairs/Governmental Relations department.

All three external site designs reflect the personality of each college and/or district location. The primary purposes of these websites are to provide visitors with:
• Current information on the college’s and/or district’s educational programs and services.
• Easy way to access enrollment information and register for courses online.
• Important contact numbers.
• Upcoming event information.
• Employment information.

One of the biggest challenges ITS faces is the various ways these three sites are maintained. Currently, all three are updated using different content management systems. Because these sites are large and need to be refreshed regularly it would benefit the district and ITS to deploy an easy to use content management system for cost savings and reduction in staff training. By implementing one content management system SAC, SCC and RSCCD’s web sites could share centralized information (calendars, newsrooms, image galleries, etc.) and be programmed similarly, but look distinctively different. This would also allow ITS to develop standardized procedures to insure all of the college and district web pages meet the accessibility standards that are in the Americans With Disabilities Act.

**Intranets**
The district hosts two intranets that provide resources for employees. RSCCD has a district-wide intranet which hosts employee-related information and resources, enrollment figures and trends, discussion forums to collect employee feedback on district-related topics, as well as benefit enrollment information.

InsideSAC provides information and services to SAC faculty and staff. This site is managed by the Associate Dean of Information & Learning Resources.

**Niche Sites**
The district also hosts niche web sites for several economic development and education programs who are affiliated with the district. These web sites are typically .com or .org sites and are supported with various levels of district resources. At this time there are no formalized style guides for these sites, but the district expects a certain level of professionalism. RSCCD has no formal governance over these sites, but work with department or program administrators when issues arise. Support of these sites are based on availability of staff. These sites include:

- Chancellor’s Ball ([www.chancellorsball.org](http://www.chancellorsball.org))
- Digital Media Center ([www.dmc-works.com](http://www.dmc-works.com))
- International Consortium for Educational and Economic Development ([www.iceed.com](http://www.iceed.com))
- Orange County Small Business Development Center ([www.ocsbdc.com](http://www.ocsbdc.com))
- Orange County Youth Entrepreneurship ([www.ocyep.org](http://www.ocyep.org))
- Santa Ana College Art ([www.sac.edu/art](http://www.sac.edu/art)) *
- Santa Ana College Athletics ([www.sac.edu/sports](http://www.sac.edu/sports)) *
- Santa Ana College Dance ([www.sac.edu/dance](http://www.sac.edu/dance)) *
- Santa Ana College Fine & Performing Arts ([www.sac.edu/fpa](http://www.sac.edu/fpa)) *
- Santa Ana College Journalism ([www.sac.edu/journalism](http://www.sac.edu/journalism)) *
- Santa Ana College Music ([www.sac.edu/music](http://www.sac.edu/music)) *
- Santa Ana College Speech ([www.sac.edu/speech](http://www.sac.edu/speech)) *
- Santa Ana College Theatre ([www.sac.edu/theatre](http://www.sac.edu/theatre)) *
- Santa Ana College TV/Video ([sactv.sac.edu](http://sactv.sac.edu)) *
- Workplace Learning Resource Center ([www.rscdd-wplrc.org](http://www.rscdd-wplrc.org)) *

* hosted on the external server (ext.sac.edu)
VII. Training & Staff Support

Computer and software training and staff support will be determined independently at each district location.

Training and Support
There are three ITS Helpdesks that serve employees at all locations. Services that are provided are assistance with computers, printers, servers, peripherals, department applications, telephone additions and changes.

Distance Ed Helpdesk
At SAC, the Center for Learning & Instruction and a resource specialist is available during the daytime for telephone and onsite faculty support. Students are assisted by Distance Education staff.

At SCC, the alternate media specialist, provides basic support and training to faculty using Blackboard and/or teaching online. He leads workshops on Blackboard and other technologies during FLEX week and throughout the semesters. Staff from the Tutoring Center provides support to students through the Blackboard Helpdesk (blackboard@sccollege.edu).

Academic Computing
At SAC, Information & Learning Resources is responsible for training faculty and staff on generic software programs such as new releases of MS Office, web publishing, creation of multimedia presentations, development of rich media and other programs as they occur (CCC Confer, web submission for publications). The Academic Computing Center under the Business Division is responsible for student training. The library does student training via credit classes and workshops and at point of use.

At SCC, responsibility for training of faculty and staff is shared by ITS, the Web Task Force, and the Technology Committee. ITS offers FLEX programs on the standard software programs, such as MS Office, Outlook, and PowerPoint. The Web Task Force offers FLEX programs and workshops on web publishing. The Technology Committee publishes a newsletter with technology information and coordinates workshops and presentations on instructional and classroom technology.

TAG realizes that Training and Staff support are important to successfully integrating technology with curriculum and administrative services. The committee has agreed to develop a proposal for the training and support for faculty and staff over the next three years.
Section III

2010 -2011 Goal
Network, Infrastructure, and Cable Plant

Upgrade to Exchange 2010
Exchange 2010 has been released from Microsoft. The strategy is to wait a reasonable amount of time for other companies to test and essentially debug the latest version from Microsoft. Sufficient time has passed and ITS recommends upgrading to Exchange 2010 the summer of 2010. The funding includes hardware and licensing costs.

Budget: $100,000       Source: ITS

Upgrade wireless network at SAC
The district as a whole has an outdated wireless system. The current access points cannot accept the latest technologies produced by current laptop manufacturers. ITS and TAG are requesting $300,000 to replace the wireless system at SAC. ITS will hire a consultant to understand the varying needs of the campus, write a scope of work document including a design of where the access points should be located, assist ITS in evaluating the results, and manage the product implementation. This system will become the standard for the other locations and funds to upgrade the other locations will be requested in the future.

Budget: $300,000       Source: ITS Fixed Costs

Refresh Network equipment
Refresh Network and infrastructure according to the standards outlined in the Strategic Technology plan.

Budget: $150,000       Source: ITS

Replace Remote System
The services provided by the address remote.rsccd.org are provided by a pair of hardware appliances from Juniper Networks. The current hardware is currently considered end-of-life by Juniper. The hardware we have is no longer being manufactured, hardware repair/support services will eventually become unavailable and software updates for the appliances will only address security vulnerabilities and not feature updates. The prevalence of remote users using updated operating systems (ie. Microsoft Windows 7) require us to replace the appliances. The appliances were purchased with the capacity needed at the time, which the district is projected to outgrow.

Budget: $40,000       Source: ITS
**Business Resumption Plan**
The district’s main server room is located at SAC and the district is at risk if a situation arose, such as a flood or loss of power, which makes the room inoperable. With the new Maintenance and Operations building at SCC, ITS has an opportunity to develop a secondary server room as a recovery site. Equipment will be purchased to recover major district-wide applications (e.g. Datatel, email, and websites) in the event of a significant disaster. However, this equipment will not remain idle as it will be used to off load testing performed on production machines.

Budget: $200,000 Source: ITS

**Develop a Single Sign-on Strategy**
There are several applications requiring authentication currently used students, staff and faculty. These applications include WebAdvisor, Blackboard, Exchange (email), CI Track (attendance tracking), library proxy servers, and wireless access. ITS would like to unify the authentication of these applications so that there is only one login and password.

Budget: $30,000 Source: ITS
Computer Replacement
Refresh computers, servers, and printers according to the standards outlined in the Strategic Technology plan.

<table>
<thead>
<tr>
<th>Santa Ana College--Computers, Printers, Servers</th>
<th>Number of computers</th>
<th>Number to be replaced</th>
<th>Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom &amp; Labs</td>
<td>1316</td>
<td>329</td>
<td>$1,200</td>
<td>$394,800</td>
</tr>
<tr>
<td>Administrative</td>
<td>449</td>
<td>112</td>
<td>$1,200</td>
<td>$134,700</td>
</tr>
<tr>
<td>Printers</td>
<td>105</td>
<td>18</td>
<td>$1,500</td>
<td>$26,250</td>
</tr>
<tr>
<td>Servers</td>
<td>47</td>
<td>16</td>
<td>$3,000</td>
<td>$47,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$602,750</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Centennial Education Center--Computers, Printers, Servers</th>
<th>Actual QTY</th>
<th>Replacement QTY</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom &amp; Labs</td>
<td>340</td>
<td>85</td>
<td>$1,200</td>
</tr>
<tr>
<td>Off site computers</td>
<td>175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative</td>
<td>102</td>
<td>26</td>
<td>$1,200</td>
</tr>
<tr>
<td>Printers</td>
<td>78</td>
<td>13</td>
<td>$1,500</td>
</tr>
<tr>
<td>Servers</td>
<td>10</td>
<td>3</td>
<td>$3,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Santiago Canyon College--Computers, Printers, Servers</th>
<th>Actual QTY</th>
<th>Replacement QTY</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom &amp; Labs</td>
<td>605</td>
<td>151</td>
<td>$1,200</td>
</tr>
<tr>
<td>Administrative</td>
<td>403</td>
<td>101</td>
<td>$1,200</td>
</tr>
<tr>
<td>Printers</td>
<td>68</td>
<td>11</td>
<td>$1,500</td>
</tr>
<tr>
<td>Servers</td>
<td>10</td>
<td>3</td>
<td>$3,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Orange Education Center--Computers, Printers, Servers</th>
<th>Actual QTY</th>
<th>Replacement QTY</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom &amp; Labs</td>
<td>468</td>
<td>117</td>
<td>$1,200</td>
</tr>
<tr>
<td>Off site computers</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative</td>
<td>103</td>
<td>26</td>
<td>$1,200</td>
</tr>
<tr>
<td>Printers</td>
<td>47</td>
<td>8</td>
<td>$1,500</td>
</tr>
<tr>
<td>Servers</td>
<td>0</td>
<td>0</td>
<td>$3,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>District Office--Computers, Printers, Servers</th>
<th>Actual QTY</th>
<th>Replacement QTY</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative</td>
<td>174</td>
<td>44</td>
<td>$1,200</td>
</tr>
<tr>
<td>Printers</td>
<td>35</td>
<td>6</td>
<td>$1,500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Grand Total** **$1,338,250**
**Projector Replacement**

Refresh mediation equipment according to the standards outlined in the Strategic Technology plan.

<table>
<thead>
<tr>
<th>College</th>
<th>Actual</th>
<th>Replacement</th>
<th>Cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Santa Ana College--Projectors</strong></td>
<td>120</td>
<td>20</td>
<td>$1,500</td>
<td><strong>$30,000</strong></td>
</tr>
<tr>
<td><strong>Centennial Education Center--Projectors</strong></td>
<td>35</td>
<td>6</td>
<td>$1,500</td>
<td><strong>$8,750</strong></td>
</tr>
<tr>
<td><strong>Santiago Canyon College--Projectors</strong></td>
<td>90</td>
<td>15</td>
<td>$1,500</td>
<td><strong>$22,500</strong></td>
</tr>
<tr>
<td><strong>Orange Education Center--Projectors</strong></td>
<td>30</td>
<td>5</td>
<td>$1,500</td>
<td><strong>$7,500</strong></td>
</tr>
</tbody>
</table>
Enterprise Resource Planning Systems

Document Imaging Solution
Several departments would benefit by implementing a document imaging solution to manage their paperwork that is integrated with Datatel. Document Management solutions not only manage documents but introduce the concept of “workflow” for a department. ITS has formed a project team to evaluate these solutions and have agreed to let SAC and SCC’s Financial Aid test this new system. Then, once the team has a better understanding of costs, for software, licensing, equipment and consulting, a project plan will be developed to phase in the other departments.

<table>
<thead>
<tr>
<th>Budget:</th>
<th>$100,000</th>
<th>Source:</th>
<th>Measure E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget:</td>
<td>$ 80,000</td>
<td>Source</td>
<td>Financial Aid</td>
</tr>
</tbody>
</table>

Bookstore Voucher System
With a bookstore voucher system, once students have registered or classes, they can go to the campus bookstore and buy their books using any funds that are available to them. At the bookstore checkout stand, the cashier presses the Financial Aid Connect tendering key and the interface computes the available funds in Datatel for this student and provides an authorization. Once the transaction is completed at the POS, an invoice is created in Datatel for this purchase, which is paid through the normal payment allocation processes. This system will benefit both the student and the district. The student can now purchase books prior to the beginning of class and encourages students to purchase books at either SAC’s or SCC’s bookstore.

<table>
<thead>
<tr>
<th>Budget:</th>
<th>$25,000</th>
<th>Source:</th>
<th>Financial Aid</th>
</tr>
</thead>
</table>

Create joint faculty committee for WebAdvisor modifications
Santa Ana College would like to create a joint faculty committee to assist ITS with modifications to Datatel’s WebAdvisor product which provides on-line services to students and faculty. A joint committee would serve ITS by identifying faculty use patterns and recommendations to make WebAdvisor a useful tool. The joint committee may also interface with the Admissions and Records offices, recommending solutions for student work flow.

Budget: N/A

Implement authentication for iTunes University
Several years ago, Santa Ana College implemented iTunes University to allow students to download captured lectures. ITS is now able to provide authentication for students to access these lectures.

Budget: N/A
Transition SAC and the District’s websites to a SharePoint based product from Sector Point

Last year, Santiago Canyon College was the test site to transition their website to the new SharePoint based product from Sector Point. ITS will develop a plan to transition Santa Ana College and the District’s website to this new product. This transition will cover a two-year period.

Budget: N/A
Training and Support
As technology and systems change at a rapid pace, it is critical that the entire staff be encouraged to further their knowledge and incorporate technology into their respective areas. It is also equally important that ITS support the employees in these new technologies. TAG recognizes the need to develop training programs and support our staff.

Realizing the budget situation, TAG understands that it is not feasible at this time to hire employees to meet this need. However, TAG understands that as the budget turns around, TAG would like to have a plan prepared and submitted to Cabinet.

Budget: N/A
## ITS 2010-2011 Fixed Cost Budget—Hardware and Software Maintenance

<table>
<thead>
<tr>
<th>Service Provider</th>
<th>Service Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Datatel*</td>
<td>Student Information System</td>
<td>280,000</td>
</tr>
<tr>
<td>Datatel 3rd Party</td>
<td>Third party Tools</td>
<td>34,000</td>
</tr>
<tr>
<td>Datatel/Oracle</td>
<td>Database Platform for Datatel System</td>
<td>120,000</td>
</tr>
<tr>
<td>Blackboard</td>
<td>Instructional Course Management Software</td>
<td>215,000</td>
</tr>
<tr>
<td>XAP</td>
<td>Online Applications</td>
<td>15,000</td>
</tr>
<tr>
<td>Evisions</td>
<td>Form General tool used with Datatel</td>
<td>2,000</td>
</tr>
<tr>
<td>ECS Imaging</td>
<td>Document Scanning System for Admissions</td>
<td>14,000</td>
</tr>
<tr>
<td>ITPI</td>
<td>WinSkedAttendance Systems</td>
<td>62,000</td>
</tr>
<tr>
<td>ROC Software</td>
<td>Print Management Tool for Datatel</td>
<td>5,000</td>
</tr>
<tr>
<td>Sector Point</td>
<td>Web Content Management System</td>
<td>145,000</td>
</tr>
<tr>
<td>Curricunet</td>
<td>Curriculum Management Software--maintenance</td>
<td>24,000</td>
</tr>
<tr>
<td>CSS</td>
<td>Powerware (UPS) Maintenance--SCC, DO, OEC, &amp; DMC</td>
<td>21,000</td>
</tr>
<tr>
<td>RAM Tech</td>
<td>Powerware (UPS) Maintenance--SAC</td>
<td>8,000</td>
</tr>
<tr>
<td>CI Solutions</td>
<td>Attendance Solution for Datatel</td>
<td>3,000</td>
</tr>
<tr>
<td>Nexus</td>
<td>Network Equipment Maintenance</td>
<td>106,000</td>
</tr>
<tr>
<td>SBC Datacom (AT&amp;T)</td>
<td>Phone System (under maintenance until July 2012)</td>
<td>0</td>
</tr>
<tr>
<td>Computerland</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symantec Antivirus</td>
<td>Antivirus for PC's &amp; Macintoshes; Ghost Imaging tool</td>
<td>35,000</td>
</tr>
<tr>
<td>Forefront</td>
<td>Exchange Antivirus</td>
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</tr>
<tr>
<td>Versata</td>
<td>Enterprise Server Auditor</td>
<td>15,000</td>
</tr>
<tr>
<td>Servlet Exec</td>
<td>Web Application Server</td>
<td>6,000</td>
</tr>
<tr>
<td>Juniper</td>
<td>Remote Access Solution</td>
<td>15,000</td>
</tr>
<tr>
<td>What's up Gold</td>
<td>Network monitoring Tool</td>
<td>1,200</td>
</tr>
<tr>
<td>SSL Certificates</td>
<td>Web Secure Socket Layer Certificates</td>
<td>4,600</td>
</tr>
<tr>
<td>Verisign Certificates</td>
<td>Secure website for Attendance, Meet, and &gt;&gt;&gt;</td>
<td>15,500</td>
</tr>
<tr>
<td>VMWare</td>
<td>Virtual Server maintenance</td>
<td>15,500</td>
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<tr>
<td>Bluesocket controller</td>
<td>Wireless</td>
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</tr>
<tr>
<td>Microsoft Campus Agreement</td>
<td>Microsoft Software License</td>
<td>120,000</td>
</tr>
<tr>
<td>Palo Alto</td>
<td>Firewall</td>
<td>35,000</td>
</tr>
<tr>
<td>Symantec Enterprise Vault</td>
<td>Email Archiving Solution</td>
<td>40,000</td>
</tr>
<tr>
<td>IronPort</td>
<td>Email Traffic Appliance-3 year renewal</td>
<td>70,000</td>
</tr>
<tr>
<td>Hewlett Packard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tape Library</td>
<td>Enterprise Backup Solution</td>
<td>6,500</td>
</tr>
<tr>
<td>Virtual Library</td>
<td>Enterprise Backup Solution</td>
<td>7,500</td>
</tr>
<tr>
<td>Servers</td>
<td>Datatel/SQL Servers</td>
<td>86,000</td>
</tr>
<tr>
<td>SAN</td>
<td>Central Database Storage Solution</td>
<td>52,000</td>
</tr>
<tr>
<td>Data Protector</td>
<td>Enterprise Backup Solution</td>
<td>30,000</td>
</tr>
<tr>
<td>Wireless--SAC</td>
<td>Wireless at SAC</td>
<td>300,000</td>
</tr>
</tbody>
</table>

**Total Annual Maintenance Agreements** $1,923,300

*last year of 4% maintenance cap