Accreditation Work Group Progress Form

**Work Group Leaders:** Please complete and submit this form to Gohar Momjian gmomjian@ccsf.edu and Grace Esteban mesteban@ccsf.edu via email by **Friday September 7.**

**Recommendation number and topic:**
Recommendation #9 – Technology Resources

**Full recommendation text:**
To fully meet Standard III.C Technology Resources, the team recommends the college develop a comprehensive plan for equipment maintenance, upgrade and replacement that is integrated with the institution’s budget allocation processes; and that the college continues to monitor its information technology systems and implement measures to more fully secure the technology infrastructure.

**Related standards:**

III.C.1.a, c-d, III.C.2

**Work group members:**

Tim Ryan, Eric Raznick, Doug Re, James Hall, Cynthia Dewar, Carmen Lamha, Carol Reitan, Craig Persiko, Kim Ginter-Webster, Monika Liu, Lidia Szajko

**Provide the dates and times of all meetings held to date. For each meeting, please briefly describe the primary focus of the discussion that took place (1-2 sentences per meeting).**

- **Tuesday, July 24 (9am-11am):** Introduction to team, establish baseline knowledge of the accreditation response process and the Technology Resources recommendation and Standards.
- **Tuesday, July 31 (9am-11am):** Discuss Planning and Budgeting timeline and role of the Technology Plan. Identify and define Activities and complete Matrix for submission.
- **Tuesday, August 7 (1pm-3pm):** Discuss revised Planning and Budgeting timeline, prepare outline of response document, discuss and improve flowchart for lab replacement strategy.
- **Tuesday, August 21 (9am-11am):** Determined alignment of technology replacement with Program Review including additional language to include in Program Review Guidelines. Discussed Perkins grant annual timeline and its current independent/uncoordinated process.
- **Tuesday, August 28 (9am-11am):** Discussed feedback from Steering Committee including which type of technology we will be addressing and also Banner baseline (CalB). Identified Bridge plan for upcoming fiscal years and prepared spreadsheets with anticipated technology resources costs.
- **Tuesday, September 4 (9am-11am):** Discussed the latest information from the Planning Work Group and the format of the Progress Report due on September 7.
Describe your plans for addressing the recommendation. Include a brief paragraph describing each activity included on your timeline along with key dates for accomplishing those activities.

1. Articulate Relationship with Planning Process. This activity is the key component of the Technology Resources Recommendation. It will be dependent on the efforts of the Planning Work Group to determine the timeline of the overall planning and budgeting process and will require sufficient information be provided to our decision makers to determine the CCSF priorities for a given year. The next meeting of the Planning Work Group is September 10, 2012. This plan is primarily completed on September 7, 2012 although it will need to be continued on a regular basis to ensure the detailed coordination is proceeding as required.

2. Complete Academic Equipment Inventory. It is important for us to know what technology assets CCSF currently owns and their age in order to determine the replacement strategy and priority. The inventory includes computer classrooms, computer rooms and classroom projectors. Completed on August 31, 2012, although there will be ongoing updates.

3. Develop Models for Replacement. Technology equipment will be upgraded or replaced on a pre-defined schedule using model based on age, functionality or other factors. Models for consolidation and sharing of resources across multiple organizations are also required and will be included in this activity. (Completed September 4, 2012).

4. Redefine Technology Plan Dates. The 2009-2011 Technology Plan has been extended for one year while the 2013-2016 plan is finalized. Technology-related projects will be incorporated into the Program Review process beginning in the Fall semester. Departmental submissions are due by mid-December for inclusion in the upcoming fiscal year. (Completed).

5. Determine Cost and Staff Requirements for Technology Resources. These items will also be incorporated into the Program Review process described above. All technology-related staffing requests will be submitted by ITS to enhance technical services across all organizations. (Completed).

6. Identify Constraints of Funding Sources. The funding sources for technology equipment are General Fund, Bond measures, grants and donations. Grants are typically limited to funding Academic equipment and the Bond is limited to funding Administrative equipment. It is important to identify the differences between the funding sources as a specific one will be allocated as part of the technology acquisition process. (Completed September 4, 2012).

7. Identify Guiding Principles. This activity is analogous to redefining the ITS Mission Statement to be inclusive of operating principles for issues such as standards and staffing. (Completed August 7, 2012).

8. Identify Sources of Equipment Usage Data. We do not know how frequently many of our computing assets are used and hence do not have the information available to make data-driven
decisions. This is especially important considering our goal of computer classroom consolidation instead of a direct one-for-one replacement. (Completed August 31, 2012).

9. Prepare Second Progress Report and Draft Accreditation Response. A draft outline was completed on August 15, 2012 to ensure the scope of activities are sufficiently inclusive for preparing the final response and that all of the key discussion points are defined in the final document. (Completed September 7, 2012).

Summarize your progress to date on carrying out the activities described above where applicable. If you have completed any of these activities, please note the date on which it was completed and append the evidence or any products relating to the activity.

I. CCSF Technology Equipment

City College technology equipment is used in a standardized and integrated manner throughout the college community. Based on the unique requirements of college academic and administrative departments the types of technology and the associated support fall into two distinct groups as described below.

    Instructional and Program Technology: This category includes technology directly related to academic or program needs and includes student computer labs, projectors, learning management system, and software for instructional purposes.

    Administrative and Institutional Technology: This category includes the administrative systems necessary to run the college and include Banner (ERP), databases, email, telephones, network, firewalls, employee computers, student health systems and library systems.

A plan has been developed in which each of these types of technology resources are incorporated into the annual planning and budgeting process for equipment upgrades, replacement and maintenance. In previous years, this has occurred on a best effort basis and has not been part of a well-defined process. Therefore, there is a need for a temporary “bridge plan” to bring our equipment, primarily faculty and staff desktops, up to the appropriate levels of technical performance. First, a “bridge plan” process will be described by which we will arrive at a standardized level where a permanent process can begin. Second, the permanent process will be described which will be used after a standardized equipment level has been achieved.

Bridge Plan Process:
It is the goal of CCSF to utilize desktop computers that are a maximum of five years old. A large-scale deployment of desktop computers for faculty and staff occurred in 2002 and 2003. Approximately 700 desktop computers currently in use have not been replaced since that time. In order to provide modernized equipment to employees as soon as possible, a financial summary which includes 700 employee desktop computers in addition to an augmentation of student desktop computers and other equipment has been prepared and is summarized in Table 4. The financial summary will be included in the ITS Program Review submission for FY13/14. Replacement of the oldest desktop computers will occur between July 1, 2013 and June 30, 2014 (FY13/14) and will be done on a geographic and departmental basis.
Permanent Process:
Ongoing technology equipment needs will be prioritized through the college planning and budget process which is described in Section II, Program Review Alignment. Departments will include technology needs in their Program Reviews and the needs will be prioritized by governance committees and administrators according to the mission of the college. A financial summary of ongoing equipment needs, including employee computers, student computers and other equipment has been prepared and is summarized in Table 5. The student desktops in computer classrooms and computer centers will be evaluated for replacement using two criteria. First, if they exceed the standard age of five years, and second if their function continues to meet the needs of CCSF as indicated by the Mission Statement and prioritized by the Program Review process. Computer classrooms and centers will be consolidated whenever possible in order to achieve operational efficiencies and to serve the needs of the entire college community.

Administrative and Institutional Technology needs will be the responsibility of the Information and Technology Services Department (ITS) in partnership with appropriate stakeholders. They will be responsible for submitting requests through the Program Review process to keep the administrative and institutional systems operational at a high level of availability by performing the required upgrades, replacement and maintenance. A Technology Survey will be conducted along with each revision of the Technology Plan (every 3 years) to ascertain the overall direction and scope of CCSF technology use. In addition to this internal process, international standards and processes for IT service alignment and delivery as developed by the IT Infrastructure Library (itil.org) will be followed when appropriate.

Reference: IT Infrastructure Library

II. Program Review Alignment
Technology equipment upgrade, replacement and maintenance will be part of the Program Review process as detailed in the Annual Assessment, Planning and Budgeting Timeline.

ITS program review will incorporate the administrative/institutional equipment in the maintenance, replacement, upgrading cycle, in consultation with stakeholder groups using institutional technology. In their regular workflow, ITS will maintain inventories of institutional equipment with maintenance schedules and dates of replacement. ITS will keep records of maintenance activities to justify ITS staffing levels, and to identify equipment that may need to be replaced outside the regular replacement cycle (exclusive of warranty replacements). Equipment usage data and other metrics will be gathered by ITS and by stakeholder units using administrative and institutional systems (e.g. Admissions and Records for Banner).

ITS will also have regular consultation and communication channels with appropriate stakeholder groups to assess continuing needs for institutional systems. Stakeholder groups will have primary responsibility for needs assessment. This information will be combined with the aforementioned workflow and metrics information to describe equipment maintenance, replacement and upgrade costs in ITS program review for the forthcoming budget year.
Instructional and Program equipment needs will be stated in the program reviews for specific departments. For equipment already in place that is supported by ITS, ITS will maintain inventories and maintenance records for staffing costs. The department will assess the continued need to provide the equipment based on metrics and learning outcomes. The department and ITS will share this information and consult to determine the continuing costs, and provide this information in the department’s program review.

In most years, continuing staff maintenance costs and consumables for equipment is all that will be needed in department program reviews. ITS will remind departments when a replacement year is coming up so that departments may incorporate replacement costs into the program review. In general, maintenance and replacement of both administrative and institutional and instructional and program equipment will be routine calculations based on experience, metrics, schedules, and known costs that can be projected several years into the future, and can be easily inserted into program review.

Requests for upgrades and additional equipment will also appear in appropriate program reviews as priorities. In addition to justification based on changing needs, metrics and/or technology shifts, consultation between ITS and departments about equipment standards, additions or shifts in staffing costs, changes to consumables, replacement cycles and so forth is critical before the request can be completed in the program review. ITS will provide standard equipment cost lists, procedures and forms to departments for guidance in this process. For administrative and institutional equipment upgrades, it is equally important that ITS consults with stakeholder departments about the proposed changes to anticipate impacts on users before the upgrade request is completed.

In the case where data and needs analysis show potential reductions of equipment needs in departments or institutional systems, ITS will facilitate planning for reduction strategies such as consolidation and redeployment of equipment. As much as possible, this planning will take place during the program review cycle, but may take place in the prioritization process if necessary.

ITS will review prioritized plans coming out of the program reviews and provide input to ensure the estimated costs are accurate and ensure proposed systems will provide the desired function. Staffing requests related to maintaining and upgrading technology equipment will be funded through an ITS Program Review request. It is expected that Technology Resources will be considered along with Finance, Human Resources, and Facilities as part of the request prioritization process as well.

The ITS review will be part of the Annual Review Cycle shown in Figure 1 which is part of the Annual Assessment, Planning and Budgeting Timeline.

Figure 1: Annual Review Cycle
III. Technology Resources Utilization

A need has been identified for determining the utilization of computer classrooms and centers. This is essential for leveraging our resources and becoming as efficient as possible. There are currently two systems in use at CCSF which are capable of performing this task, Accutrack and PC Cop, each of which has features that are beneficial to particular organizations. CCSF will work towards standardization of these systems to achieve efficiencies and will continue to expand the use of these systems to include all student desktop computers. The utilization data will be used as part of a data-driven decision making process to determine which labs and centers can be consolidated in order to meet the overall needs of CCSF, a flowchart describing this process has been developed. In addition to providing equipment usage data, the systems above have the added benefit of collecting usage information which can be used for attendance reporting purposes.

IV. Technology Resources Costs

The largest expense for technology equipment in use at CCSF is incurred during the replacement process. Continuous technical advancements allow a longer useful life than was previously possible, but the amount of time a given system can be used is dependent on how heavily it has been used in the past and how well it meets current technical performance requirements.

A standard replacement cycle for Instructional and Program technology equipment has been developed and is shown in Table 1 below.

<table>
<thead>
<tr>
<th>System</th>
<th>S/W Upgrade Cycle</th>
<th>H/W Upgrade Cycle</th>
</tr>
</thead>
</table>

Table 1: Instructional and Program Technology Replacement Cycle
Table 2: Instructional and Program Technology Costs

<table>
<thead>
<tr>
<th>System</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Computer (includes monitor)</td>
<td>1,000</td>
</tr>
<tr>
<td>Laptop Computer</td>
<td>1,200</td>
</tr>
<tr>
<td>Printer</td>
<td>700</td>
</tr>
<tr>
<td>Projector Replacement</td>
<td>1,000</td>
</tr>
<tr>
<td>Projector Installation (includes mounting and control panel)</td>
<td>10,000</td>
</tr>
</tbody>
</table>

A standard replacement cycle for Administrative and Institutional technology equipment has been developed and is shown in Table 3 below.

Table 3: Administrative and Institutional Technology Replacement Cycle

<table>
<thead>
<tr>
<th>System</th>
<th>S/W Upgrade Cycle</th>
<th>H/W Upgrade Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERP Software (Banner)</td>
<td>2 years</td>
<td>N/A</td>
</tr>
<tr>
<td>ERP Servers</td>
<td>Ongoing</td>
<td>5 years</td>
</tr>
<tr>
<td>Blade Servers</td>
<td>Ongoing</td>
<td>7 years</td>
</tr>
<tr>
<td>Storage Area Network</td>
<td>Ongoing</td>
<td>5 years</td>
</tr>
<tr>
<td>Network Switches</td>
<td>Ongoing</td>
<td>8 years</td>
</tr>
<tr>
<td>Core Switches</td>
<td>Ongoing</td>
<td>5 years</td>
</tr>
<tr>
<td>Telephone System</td>
<td>2 years</td>
<td>15 years</td>
</tr>
<tr>
<td>Telephone Sets</td>
<td>N/A</td>
<td>12 years</td>
</tr>
<tr>
<td>Firewalls</td>
<td>2 years</td>
<td>4 years</td>
</tr>
<tr>
<td>WiFi System</td>
<td>Ongoing</td>
<td>5 years</td>
</tr>
<tr>
<td>Personal Computers</td>
<td>1 Year</td>
<td>5 Years</td>
</tr>
<tr>
<td>Printers</td>
<td>N/A</td>
<td>7 Years</td>
</tr>
</tbody>
</table>

There are predictable ongoing annual costs associated with the upgrade, replacement and maintenance of Administrative and Institutional technology. These are detailed in Table 4 below and are included in the current CCSF budget for FY12/13.
Table 4: FY12/13 Administrative and Institutional Technology Costs

<table>
<thead>
<tr>
<th>Expense Category</th>
<th>Expense Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITS Operations</td>
<td>Supplies</td>
<td>15,000</td>
</tr>
<tr>
<td>ITS Operations</td>
<td>Maintenance/Licenses</td>
<td>1,070,000</td>
</tr>
<tr>
<td>ITS Operations</td>
<td>Equipment Replacement</td>
<td>50,000</td>
</tr>
<tr>
<td><strong>Total FY12/13 Cost</strong></td>
<td></td>
<td>1,135,000</td>
</tr>
</tbody>
</table>

The combined FY13/14 technology cost for both Instructional/Program needs and also Administrative/Institutional needs has been determined and is summarized in Table 5 below. This table includes the ongoing annual costs as well as two approaches to the Bridge Plan of providing 700 PCs for Faculty and Staff. The first approach entails buying used PCs at a cost of $350 each which are typically purchased at the end of a three year lease period and include a three year warranty. The second approach entails buying new PCs at a cost of $1,000 each.

Table 5:
FY13/14 Instructional/Program and Administrative/Institutional Technology Costs

<table>
<thead>
<tr>
<th>Expense Category</th>
<th>Expense Item</th>
<th>Amount (Used PCs)</th>
<th>Amount (New PCs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITS Operations</td>
<td>Supplies</td>
<td>15,000</td>
<td>15,000</td>
</tr>
<tr>
<td>ITS Operations</td>
<td>Maintenance/Licenses</td>
<td>1,070,000</td>
<td>1,070,000</td>
</tr>
<tr>
<td>ITS Operations</td>
<td>Equipment Replacement</td>
<td>50,000</td>
<td>50,000</td>
</tr>
<tr>
<td><strong>Total Ongoing Cost</strong></td>
<td></td>
<td>1,135,000</td>
<td>1,135,000</td>
</tr>
<tr>
<td>ITS Operations</td>
<td>Professional Development</td>
<td>30,000</td>
<td>30,000</td>
</tr>
<tr>
<td>ITS Operations</td>
<td>Data Center Equip.</td>
<td>100,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Employee PCs</td>
<td>Faculty Desktops (350)</td>
<td>122,500</td>
<td>350,000</td>
</tr>
<tr>
<td>Employee PCs</td>
<td>Staff Desktops (350)</td>
<td>122,500</td>
<td>350,000</td>
</tr>
<tr>
<td>Academic Lab PCs</td>
<td>Student Desktops (300)</td>
<td>300,000</td>
<td>300,000</td>
</tr>
<tr>
<td>Academic Center PCs</td>
<td>Student Desktops (200)</td>
<td>200,000</td>
<td>200,000</td>
</tr>
<tr>
<td>Academic Infrastructure</td>
<td>Classroom Projectors</td>
<td>100,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Academic Infrastructure</td>
<td>Lab Utilization System</td>
<td>50,000</td>
<td>50,000</td>
</tr>
<tr>
<td><strong>Total Additional Cost</strong></td>
<td></td>
<td>995,000</td>
<td>1,450,000</td>
</tr>
<tr>
<td><strong>Total FY13/14 Cost</strong></td>
<td></td>
<td>2,160,000</td>
<td>2,615,000</td>
</tr>
</tbody>
</table>
The combined technology cost for future fiscal years, beyond FY13/14, has been determined and is summarized in Table 6 below.

<table>
<thead>
<tr>
<th>Expense Category</th>
<th>Expense Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITS Operations</td>
<td>Supplies</td>
<td>15,000</td>
</tr>
<tr>
<td>ITS Operations</td>
<td>Maintenance/Licenses</td>
<td>1,070,000</td>
</tr>
<tr>
<td>ITS Operations</td>
<td>Equipment Replacement</td>
<td>50,000</td>
</tr>
<tr>
<td></td>
<td>Total Ongoing Cost</td>
<td>1,135,000</td>
</tr>
<tr>
<td>ITS Operations</td>
<td>Professional Development</td>
<td>30,000</td>
</tr>
<tr>
<td>ITS Operations</td>
<td>Data Center Equip.</td>
<td>100,000</td>
</tr>
<tr>
<td>Employee PCs</td>
<td>Faculty Desktops (175)</td>
<td>175,000</td>
</tr>
<tr>
<td>Employee PCs</td>
<td>Staff Desktops (175)</td>
<td>175,000</td>
</tr>
<tr>
<td>Academic Lab PCs</td>
<td>Student Desktops (300)</td>
<td>300,000</td>
</tr>
<tr>
<td>Academic Center PCs</td>
<td>Student Desktops (200)</td>
<td>200,000</td>
</tr>
<tr>
<td>Academic Infrastructure</td>
<td>Classroom Projectors</td>
<td>100,000</td>
</tr>
<tr>
<td>Academic Infrastructure</td>
<td>Lab Utilization System</td>
<td>50,000</td>
</tr>
<tr>
<td></td>
<td>Total Additional Cost</td>
<td>1,130,000</td>
</tr>
<tr>
<td></td>
<td>Total Future FY Cost*</td>
<td>2,265,000</td>
</tr>
</tbody>
</table>

*A 5% annual cost increase due to inflation is anticipated.*

V. CCSF Grants
As with many large academic institutions, grants can and have been a significant source of funding for technology equipment at CCSF. However, grants are not a guaranteed source of funding and cannot be depended upon as a funding source for a given year. Hence, the complete technology equipment funding needs are reflected in Tables 5 and 6 above. It is important to include the impact of grants in the overall annual planning and budgeting process. For example, when grant funding is used to purchase technology equipment, budgetary items concerning the upgrade, replacement and maintenance of equipment will be considered. Some grant-funded programs are for a specific time period while others are designed to continue on a regularly scheduled renewal cycle. Following is a description of some of the current grant programs at CCSF:

Career and Technical Education (CTE)
The Federal government’s Carl D. Perkins Career and Technical Education Act (formerly VTEA) has been the primary source of technology equipment for eligible departments, but Perkins awards can also be used for expenditures beyond technology. Perkins largely focuses on better serving special populations students (e.g. underrepresented minorities and genders) and awards are given to support program improvement. Perkins funds cannot be used for maintenance purposes. The Federal Perkins authorization ends in 2012 and its reauthorization may include different criteria.
The changing guidelines and stiff competition for awards, as well as the exclusion of technology maintenance, require CCSF to have other sources of technology funding available. Therefore, these departments will continue to seek Perkins funding for their technology needs when possible, and when that funding cannot support their needs they will request technology through the Program Review process like all other departments.

Beginning in 2013, the Perkins grant application process will be merged with the Program Review process. Instead of separate forms, departments will submit just Program Review, and when the Vice Chancellor is prioritizing funding requests she/he will work with the Perkins coordinator to determine which can be funded by Perkins. This will allow those funds to be used to maximum benefit and general college funds to be used to fund prioritized items that aren't Perkins-eligible.

**Administrative and Institutional Grants**

This category of grants includes programs such as Medical Assistance Administration (MAA) and Board Financial Assistance Program (BFAP). Both of these programs have been used in the past by CCSF to fund technology equipment and may be sources of future funding based on program availability. CCSF will pursue these programs in accordance with the appropriate guidelines, but the associated technology resources will be funded independently of the outcome of the grant awards process.

**VI. CCSF Technology Plan**

The Annual Assessment, Planning and Budgeting Timeline states that units’ program reviews are developed in response to various College Plans, among other things. One of these plans is the Technology Plan. Since Fall 2011, CCSF has been in the process of updating the 2009-11 Technology Plan, using various departmental technology planning groups and a Technology Plan Steering Committee.

Work in 2011-12 on the Technology Plan included a review of the existing plan, data sources, and the need to link a new plan more closely to the Strategic Plan, SLOs and budgets. The Technology Plan Steering Committee identified a need to add information for more college departments and update information on employee technology needs before a new plan could be finalized.

For the purpose of Fall 2012 Program Review and planning, the 2009-11 Technology Plan has been extended through 2012, as there are carryover goals already identified.

It is recommended that the Technology Plan Steering Committee revisit the Technology Plan format and content to synchronize more effectively with the District’s Mission, Strategic Plan, and other District Planning documents and hierarchies. Specifically,

- The Technology Plan should provide a framework for three years of technology support, including purpose, vision, mission, guiding principles, assumptions, goals and objectives
- The level of content should be consistent with other plans in the same area of the District’s planning flow chart, such as the Education Master Plan and Facilities Master Plan
- Goals in the Strategic Plan, institutional learning outcomes and Accreditation Standards should be explicitly referenced in the Technology Plan.
• Data gathering methodologies and resources for ongoing review and updating of the Technology Plan should be identified and documented in the plan
• Timelines for the annual review and revision of the Technology Plan should be established and included in the plan
• Budgeting related to the Technology Plan should be linked to technology requests identified in Program Review and Annual Planning priorities. Specific technologies continued or recommended through these processes should be linked to learning outcomes and accreditation standards.
• A completed Technology Plan for 2013-16 will be submitted to the Board of Trustees for approval by the end of December 2012.

VII. Information Security Improvements

Overview
The CCSF information security infrastructure is improved on an ongoing basis to incorporate vendor feature enhancements, adapt to new threats and provide the necessary capacity to meet the needs of Instructional and Administrative programs. Following is a summary of the current major components of the CCSF defense-in-depth infrastructure and the anticipated improvements to be made during the next twelve months. Additional improvements to overall data security and information assurance will be defined and implemented by the ITS Management Team, ITPC and other organizations as required. It is important to emphasize that hardware-based systems are only one component in a successful network security strategy. Active participation and precautions are also required by all individuals entrusted with sensitive information. When possible, international standards will be followed for information security implementation as outlined in the Control Objectives for Information and Related Technology (COBIT) guidelines.

Reference:
Control Objectives for Information and Related Technology (COBIT):

Checkpoint Firewall
The Checkpoint firewall consists of a management console and two enforcement points in a high-availability cluster with one active and one standby system. It was recently upgraded to version R75.20 and an Intrusion Prevention System (IPS) software blade was activated. Prior to the end of 2012, the enforcement points will be migrated to new hardware platforms, HP DL380 server, which will increase the number of network interfaces. The additional interfaces will provide a redesigned server environment and facilitate clearer and more stringent enforcement of security policies.

Palo Alto Networks Firewall
The Palo Alto firewall consists of a single system, Model 2050, running PAN OS version 4.1.6. It is currently used for controlling peer-to-peer (P2P) traffic, conducting threat analysis and performing anti-virus filtering. The current threat analysis license is due to expire in July, 2013.
During the next six months the need for this level of the multi-tiered security environment will be re-examined. If this system is determined to be required, the current licenses will be extended in one-year increments and an evaluation will be performed to determine if a larger and/or alternative system should be implemented to provide this function in the future.

**Intrusion Detection System**
An Open Source Intrusion Detection System (IDS) was installed at CCSF in January, 2012, and is based on an application called AlienVault. The IDS system is currently installed on a set of three servers. In order to consolidate the servers and leverage new hardware capabilities, the AlienVault application will be re-installed on a new HP server prior to the end of 2012. It is estimated it will take two weeks to complete the installation and the subsequent tuning before the new system becomes operational.

**Desktop Anti-Virus Software**
CCSF has a site license for McAfee Anti-Virus software which is used for Faculty, Staff and Student desktops. The site license provides access to the latest versions of software on an ongoing basis and is valid until October, 2013. Replacement solutions are being evaluated and tested with the goal of selecting a new anti-virus solution during the first quarter of 2013. The improved desktop computer replacement cycle of a maximum of five years will provide sufficient performance capacity to utilize the capabilities of desktop anti-virus solutions.

**Server Anti-Virus Software**
OSSEC clients have been installed on the majority of ITS-administered server platforms to be used in combination with the IDS system. Additional enterprise level anti-virus solutions will be evaluated for Windows, Linux and HP-UX to enhance localized intrusion detection and reporting capabilities. An emphasis will be placed on Linux as it will potentially become the operating system for Banner in 2013.

**VIII. Efficiency Improvement Initiatives**

**Expanded Use of Insight**

**Background**
The Educational Technology Department (ETD) includes the Teaching Learning Center (TLC) and the Technology Mediated Instruction (TLM) areas. ETD oversees the development, delivery and support of all online classes using Insight (CCSF’s learning management system); trains and supports faculty to use technology to enhance face-to-face classes with Insight; manages the TLC Laboratory which serves as an open computer lab for faculty and staff as well as an area for training faculty.

**Current Usage/Application**
The College has expanded its online course offerings from 65 credit courses in 2005 to 126 credit courses and 168 sections in spring 2011. ETD supports 269 tech-enhanced course sections in addition to 163 sections of online courses in the fall 2012 semester. Distance-learning courses are offered in 27 academic departments, all six schools within Academic Affairs and within the Library and Learning Resources. In certain departments, a student can complete approximately 85 percent of the requirements for an AA or AS degree by taking online classes and/or
telecourses. Students can complete approximately 95 percent of the courses required to transfer to the CSU or fulfill the IGETC pattern by taking online classes or a telecourses.

Insight is also currently being used by departments within Academic Affairs as a tool for communication, a means to gather SLO data and a repository to share materials specific to courses and department business.

**Future Application**

Increase the use of Insight by converting high demand face-to-face courses to hybrid online sections. For example, where a face-to-face section of Speech 2 is scheduled for TR from 9:30-11 am a hybrid online section of Speech 2 can be scheduled for Tuesday from 9:30-11 am and instead of meeting in class that Thursday, the students can instead complete their work on Insight. Given that the classroom is now vacant during a prime Thursday 9:30-11 am timeslot, a second section of Speech 2 can be scheduled to use that room with the remaining course work for this section being completed online.

An Insight course shell can be created for every face-to-face course each semester. Faculty can use the shell to upload course materials and communicate with students. The increased use of Insight will decrease the constant demand on Duplicating Services with the outcome being a significant decrease in copier and paper expenses.

Increase the development of online classes. Currently only about eight online courses are developed each school year. With an increase to development units approximately 15-25 online classes could be developed each school year. Target courses to develop are high demand, high FTES yielding, IGETC pattern courses.

NOTE: The above can only be completed with an increase in staff to ETD.

**Data Display and Analysis**

In order to facilitate a data-driven decision making process at CCSF, a software application called Argos will be purchased and implemented prior to the end of 2012. The application is developed by a software vendor called Evisions and will be used to provide simplified budgetary and enrollment information in a CCSF-specific format.

**California Baseline Banner**

CCSF currently uses the Banner application developed by Ellucian for student records, finance and other critical functions. Ellucian has developed a version of Banner customized for California Community colleges referred to as CalB. Within this version is a standardized program for information submission to the State Chancellor’s Office CCFS-320 Reporting System. CCSF does not currently utilize the CalB standardized program, but adoption and implementation of this standard would provide an efficiency improvement and reduce the amount of staff time required for this submission.

**Lab Utilization**

The information detailed in Section III. Technology Resources Utilization describes an efficiency improvement initiative as it will assist in a desktop computer consolidation effort to reduce the quantity of systems supported by technical staff.
Reduce Paper Forms
Efficiency improvements can be achieved by reducing the number of paper forms in use at CCSF through online initiatives. Specific examples to be implemented in 2013 include submission of online grades, online census reports and online Positive Attendance Records (PARs)

IX. Information Technology Services (ITS) Mission Statement
Information Technology Services (ITS) supports City College of San Francisco (CCSF) and all its departments by: creating services and maintaining technology being used by students and employees; providing technical expertise to improve productivity, effectiveness, and efficiencies; and providing customer support for technology. ITS is customer-centric, empowering the CCSF community by providing needed technology that in turn improves student success.

The following Guiding Principles will be followed by ITS in order to support the overall mission of CCSF. These Guidelines are part of a continuous improvement process to adapt to technological changes and allocate resources based on prioritized needs.

Sustainability
Information technology equipment will be purchased, maintained, replaced and recycled using a continuous sustainable model.

Coordination
Information technology resources will be allocated in accordance with the annual needs of CCSF through the ongoing Program Review process.

Standardization
All information technology systems will be configured to CCSF standards to ensure adequate support and reduce downtime.

Shared Resources
Efforts will be taken to make all appropriate information technology equipment accessible to the entire college community.

Staffing
Adequate staffing levels and training programs will be maintained to accommodate for technological changes and employee attrition.

Innovation
New technologies will be evaluated and implemented at CCSF in order to achieve cost savings and a high level of technical excellence.

X. Evidence
Annual Assessment, Planning and Budgeting Timeline:
(See document dated 2012-08-31)

Academic Lab and Center Inventory:
List any challenges you have encountered or anticipate facing with respect to addressing the recommendation.

Creating an atmosphere of shared resources among all departments, including both Academic and Administrative areas, will be a challenge. Currently many organizations fund equipment independently. This has created a challenge in that computer labs are often locked and are unavailable to students who are not enrolled in a particular program. The solution to this is further complicated by the need for staffing of lab aides and/or lab monitors in order for the lab to be opened.

Measuring utilization of assets is needed to determine if a given classroom or center can be consolidated. It is a currently a manual process for the computer classrooms, prepared one at a time and reflective of the class schedule for the given semester. It is even harder to measure the utilization of computer centers that are available on a drop-in basis.

Determining a computer lab consolidation plan is a major challenge. This step is important because it will dictate how many computing system we purchase and hence will have a direct impact on the budget request process. It is challenging to determine the impact of sharing labs by multiple departments as it may impact the teaching schedules of particular faculty members. For example, it does not appear to be feasible to change what is typically a day class into an evening class and vice versa. It will be difficult to perform the required consolidation within the existing Shared Governance process.
A financial plan that can meet the goals of our technology upgrade and replacement plan will be an indirect challenge. If the financial plan is not adequate the upgrade and replacement plan cannot be implemented as designed.

Ensuring adequate staffing levels to maintain the technology equipment has been and will continue to be a challenge. This is complicated by the fact that many new technology systems are more complex than previous systems and employees will need to be either re-classified into the appropriate role or new employees in new job classifications will need to be hired. Continuing to collaborate effectively across all internal organizations will become a larger challenge than it currently is due to the changes that are anticipated as a result of the Accreditation report. For technology support staff this challenge will be compounded by the ever changing nature of technology itself.