## IIIC. Technology Resources

III.C.1.

Technology services, professional support, facilities, hardware, and software are appropriate and adequate to support the institution’s management and operational functions, academic programs, teaching and learning, and support services.

**Evidence of Meeting the Standard**

In order to ensure that the technology needs of the College are sufficient to support all functions of the campus, the institution relies upon both the District and the college to identify, provide and maintain the technology infrastructure. At the District level there are several committees that help make decisions about technology services, facilities, hardware, and software to ensure that the needs of the District and campus are being met. These District groups include the District Advisory Groups, Administrative Technology Advisory Committee (ATAC), Instructional Technology Advisory Committee (ITAC), and the Distance Learning Task Force (DLTF). The committees’ descriptions and purpose can be viewed in the Strategic Technology Plan[[1]](#footnote-1).

In order to identify technology needs at the campus level, the institution engages in the annual program planning process so that instructional, student services and business services can request technological resources including facilities, hardware and software[[2]](#footnote-2). These needs are evaluated using a rubric developed by the Facilities/Technology Committee[[3]](#footnote-3), analyzed by the Technology Resource Allocation Work Group (TRAWG), with the guidance of the Technology Master Plan[[4]](#footnote-4). The Technology Master Plan specifies technology standards, guidelines for evaluating technology requests, the technology refresh plan, and provisions for adaptive technology. After requests have been prioritized, the Vice President of Business Services forwards the list to the Executive Vice President for Student Learning. The list is then reviewed by the EVP and the Deans to consider all requests across the campus. The EVP and VP for Business Services review the list to ensure alignment with the college mission and to identify funding sources. The prioritized list, along with the funding source, is presented at Management Consultation where a recommendation to the President is made. The President makes the final approval. Once approved, the results of the program plan requests are posted[[5]](#footnote-5). Since the last accreditation report, various IT projects have been undertaken to meet the needs of management and operational functions, academic programs, , and support services. These include:

* Remote access to Banner (management)[[6]](#footnote-6)
* Lync phone system to provide unified communication (operational)
* Electronic building keys (operational)
* IT NetHelpDesk work order system (teaching and learning)
* New security camera system in last 5 years (operational)
* New announcement speaker system—including text and email (operational)
* Refresh list/ choice of laptop vs. desktop (operational)
* Upgraded the computers in the Communication building labs (academic programs)
* Upgraded the computers in the Technology building labs (academic programs)
* Photo lab upgraded (academic programs)
* Installed new network security devices including a firewall, Intrusion Prevention System, and anti-malware
* Increase in the number of SMART classroom (teaching and learning)
* MyNav, Degreeworks (student support services)
* Upgrade the campus wireless network (teaching and learning)
* Implementation of the MyVCCCD mobile app (student support services)

For Distance Education decisions the District uses DLTF to advise the Chancellor on issues, policies, and needs of the District and the constituent colleges in the area of technologies needed for teaching via distance education[[7]](#footnote-7). DE technology solutions are centralized at the District level. District wide discussions take place in the ITAC committee whose membership consists of faculty representatives, instructional technologists, and Executive Vice Presidents from all three campuses. In fall 2014, the campus created a Distance Education Advisory Group that reported to the Executive Vice President. This group transitioned to a standing committee effective fall 2015 in order to have on-going assistance to the DE program. As with all standing committees, the goal is to ensure the membership reflects expertise and inclusion from the campus including faculty, staff, administrators and students.

In order to evaluate how effectively the institution meets the technological needs of groups on campus, including those of DE, the institution relies on several measures. Through the program planning process, groups who have identified and received technology requests are asked to explain how the item has been used and what results the program is seeing from the use of the item[[8]](#footnote-8). Various surveys are conducted of different constituent groups through the Campus Business Services Survey and the District Survey[[9]](#footnote-9). The Office of Instructional Technology collects feedback about campus wide technology from faculty and staff. There is an IT help desk system by which a person can submit a ticket for problems encountered in the use of IT equipment[[10]](#footnote-10). Critical and emergency requests have a response time of fifteen minutes. Urgent requests have a response time of an hour. Normal priority requests have a response time of approximately 4 hours and low requests have a 1 day response time[[11]](#footnote-11). The District continually reviews the DE and portal system statistics to ensure that servers are adequately sized for their role. If servers are being heavily stressed, additional or larger servers are added.

There are many features of the technological infrastructure that support reliability, disaster recovery, privacy and security, the servers and storage used for distance education are adequately sized to handle the peak traffic that occurs the week prior to the start of the semester as well as the first week of the semester. The organization uses five portal servers that act as the front end for the my.vcccd.edu portal[[12]](#footnote-12). The current distance learning system in use is Desire2Learn (D2L) and is hosted at locally Moorpark College. The D2L system is upgraded on a periodic basis to add features and to update security[[13]](#footnote-13). Each portal server can handle several hundred simultaneous connections to the Desire2Learn system. All systems at Moorpark College and the District office used to support Desire2Learn and distance learning have redundant components. In the event that any one component fails, students and instructors will still be able to access the system. Along with redundant systems, all server data is backed up nightly. Copies of those backups are then sent to the disaster recovery site at Ventura College[[14]](#footnote-14). There are several measures in place to provide security to the distance learning system. Those measures include a firewall, an Intrusion Prevention System (IPS), and antivirus software. The firewall only allows specified traffic to the Desire2Learn system. This helps prevent unauthorized access. The IPS protects the Desire2Learn system from potential vulnerabilities that hackers might exploit. The antivirus system protects the system from malware and viruses. The firewall, IPS, and antivirus applications are constantly updated. The Desire2Learn system itself has multiple levels of security that control system access[[15]](#footnote-15).

**Analysis and Evaluation**

The College uses several methods to ensure that the technology needs and support are sufficient to support all functions of the campus. On an annual basis, every department submits a Program Plan with requests for technology that will be used to aid in instruction or service. All requests submitted through Program Plans go to the Technology Resource Allocation Work Group (TRAWG) for vetting and review. The TRAWG workgroup uses a defined set of criteria for prioritizing technology requests via Program Plans. Technology that directly impacts student learning or if the current technology is failing or obsolete due to age or amount of use are examples of criteria used.

The College IT department utilizes a network based helpdesk system that allows users to submit work orders via email, voicemail, or through a form. The helpdesk system allows users to monitor the status of their work order and any progress made. When an update is made to the work order, the user is automatically emailed by the system so the user has the latest information. The helpdesk system also has a Service-Level Agreement (SLA) function that is used to ensure that requests are responded to in a timely manner. The College IT department averages approximately 94% SLA compliance. Consistently meeting SLAs ensures that support is at an adequate level.

III.C.2.

The institution continuously plans for, updates and replaces technology to ensure its technological infrastructure, quality and capacity are adequate to support its mission, operations, programs, and services.

**Evidence of Meeting the Standard**

The institution has several methods used to guarantee that the technological infrastructure is maintained and updated to support its programs and services. The District has set up special accounts for technology refresh. These accounts are funded by the campus for current and future technology needs. The amount set aside is made by local decision. The annual IT operational plan determines the technology refresh budget needs for the coming academic year and is specific to the needs of the College[[16]](#footnote-16). The program plan template allows faculty, staff and administrators to specify if they have a technology need, summarizes data they have to support their request, explains how the request is a short or long term need, and describes how it will benefit the program[[17]](#footnote-17).

District IT distributes the same resources to each campus so as to provide a robust and secure technical infrastructure and maintain an up-to-date, effective platform for its DE program. The District ITAC committee advises the Chancellor on technology planning and priority setting for all technologies used in the teaching/learning process. The ITAC committee advises on changes made to the DE environment[[18]](#footnote-18). District IT makes sure the systems are robust and secure. As described in 1C.1, the District and College have the provisions in place for all programs and services, including Distance Education. The District and campus IT departments continually update the campus infrastructure. This includes the routers, firewalls, switches, antivirus software, and servers. Critical infrastructure has redundancies to provide a higher degree of reliability[[19]](#footnote-19).

As described in 1B.5 the institution bases its decision-making on the program planning process outlined in the *Making Decisions* document. This program planning process helps ensure that there is a documented need for requests and that requests are received and have an impact on the program. In this process programs are asked to consider evidence such as SLO assessments, retention and success data and the number of majors to help explain the rationale for equipment and technology requests[[20]](#footnote-20). Broadly the campus routinely updates its Technology Master Plan to reflect the mission, values and strategic vision of the institution. The Technology Master Plan informs the rubric that is used by the Technology Resource Allocation Workgroup in order to prioritize technology requests. Through the program planning process, faculty, staff and administrators can request specific upgrades/updates to the infrastructure that will help their programs through the program planning process[[21]](#footnote-21).

**Analysis and Evaluation**

The use of technology plays a critical role in every aspect of the campus. The campus continually upgrades systems and infrastructure in order to ensure that services are not interrupted. The systems that host our distance learning and ERP applications are the most critical and need to be protected from failure.

During the 2014-2015 academic year, it was discovered that the systems that host our distance learning and ERP system at the district office datacenter were running in a poor physical environment. The power and air conditioning in the datacenter were aging and became unreliable. In depth discussions were held between district IT and campus IT to come up with a contingency plan to protect the integrity of these systems.

As a result of these discussions, a plan was formed to have better backups of these systems. It was also determined that these critical system should be moved to the Moorpark College datacenter where the physical environment is very reliable. The datacenter migration has begun and will be completed by the end of the 2015-2016 academic year.

III.C.3.

The institution assures that technology resources at all locations where it offers courses, programs, and services are implemented and maintained to assure reliable access, safety, and security.

**Evidence of Meeting the Standard**

Moorpark College has converted nearly all lab computers on campus to thin client systems. The thin clients utilize a virtual desktop infrastructure (VDI) environment which allows the campus to quickly upgrade a lab with new software as well as to deploy a new image in the event that a system becomes corrupt or unusable. The management system used to control the VDI environment is called vWorkspace[[22]](#footnote-22). The IT department has described the maintenance of its technological infrastructure and equipment in its Service Level Agreements (SLA),[[23]](#footnote-23) and the process for hiring of staff to maintain the infrastructure[[24]](#footnote-24) in their Program Plan**.** All systems at the campus used to support the learning management system, email, and the ERP system have redundant components. In the event that any one component fails, students, faculty and staff will still be able to access the systems. Along with redundant systems, all server data is backed up on a nightly basis as discussed in 3C.1. The campus also uses network monitoring systems to monitor critical network equipment including switches, routers, and firewalls. Those networking monitoring systems include Foglight NMS and HP Intelligent Management Center[[25]](#footnote-25). The network monitoring systems back up the configurations of the devices that they monitor. In order to protect against power grid failures, the District office and Moorpark College datacenters have emergency power in the form of uninterruptable power supplies (UPS) and backup power generators.

**Analysis and Evaluation**

The College has committed to ensure reliable and secure access to technology on campus for students, faculty, management, and staff. As curriculum and teaching methodologies used in the classroom advance, the technology used must also advance. The growth in technology creates greater demands on the campus infrastructure. The College recognizes this need and plans for continual upgrades and maintenance of all technology used on campus.

The College implements an annual refresh to replace aging technology on campus. This can include computers, servers, audio visual, and software applications. When equipment is not scheduled for refresh, preventative maintenance is performed. Preventative maintenance includes the reimaging of labs, firmware updates to infrastructure, updates to security appliances, and patch management. These actions provide a stable and secure infrastructure that can handle the technological demands of today as well as the future.

III.C.4.

The institution provides appropriate instruction and support for faculty, staff, students, and administrators, in the effective use of technology and technology systems related to its programs, services, and institutional operations.

**Evidence of Meeting the Standard**

To assess the needs of faculty and staff as it pertains to technology training, the Professional Development Committee (formerly Faculty Development) does surveys every year at Fall Fling asking faculty what workshops would be helpful during Flex Week and throughout the year. The recommendations are then forwarded to the Instructional Technologist. These suggestions lead to the creation of a variety of workshops regarding technology and DE instruction[[26]](#footnote-26). When the campus migrates to a new software program, the District provides trainings at each campus for such programs (OMNI update, Drupal, Lync phones)[[27]](#footnote-27). In addition, faculty can request of the Instructional Technologists one-on-one trainings for specific needs.There is an IT help desk for faculty which documents when a request was submitted and when the work was completed. IT help desk orders are normally submitted online by email, the IT help desk or by calling the IT help desk and they will input the ticket on the caller’s behalf[[28]](#footnote-28).

The institution provides training in the use of technology to faculty, staff and, to a limited extent, students. Recognizing that teaching online is a different challenge, requiring new tools and skillset, the Instructional Technologist schedules trainings for faculty in the distance learning system which are held at the beginning of each fall semester during Flex Week as well throughout the semester[[29]](#footnote-29). This training is required of all faculty before teaching an online or hybrid course. In addition, each Flex Week there is at least one day of training devoted to technology workshops. Training is continued throughout the semester for those seeking to teach DE classes[[30]](#footnote-30). The Instructional Technologist also leads training for programs that might be used by faculty, such as Lynda.com. These trainings are part of a series called ‘TechEd Breaks’[[31]](#footnote-31). Attendance at these trainings is tracked and faculty/staff are asked to evaluate the effectiveness of trainings during Flex week[[32]](#footnote-32).

While there is no official technology training for students except through credit work, the Open Access Lab (OAL) has student workers that help students with questions related to using computers and applications in the OAL. The library staff offers sessions to students on how to use the library databases. Recognizing that students need to be comfortable with technology in order to do well in DE classes, there is an online tutorial available 24/7 for students[[33]](#footnote-33). To further assist students beyond the online tutorials, students can call a dedicated DE helpline or submit questions related to accessing their DE classes. The helpline and email account are staffed by trained student workers and usage rates for the helpline are monitored to better understand peak times and issues[[34]](#footnote-34).

Support for the Distance Education program on campus includes several resources available to students:

* The campus provides over 300 open access computers for students to access their DE courses.
* The District has added several front end servers as the load has increased. This has helped ensure that the DE environment is sized appropriately for the amount of users connected to the DE environment[[35]](#footnote-35).
* 140 open access computers in the Open Access Computer Lab, 1st floor of Library and Learning Resources
* 46 open access computers, 2nd floor of Library and Learning Resources
* 40 open access computers, 3rd floor of Library and Learning Resources
* 40 open access computers, 1st floor of Fountain Hall
* 36 in the Language Lab, 3rd floor Library and Learning Resources used for occasional overflow
* 12 open access computers, 2nd floor of Physical Science
* Library Computer Lab: 52 hours a week during regular semester; 8 am – 8 pm M-Th and 8 am – 12pm F
* The campus provides a student wireless network that allows students with wireless devices the ability to access the DE environment from nearly anywhere on campus.
* Students have the ability to print from their personal devices to campus printers

**Analysis and Evaluation**

Technology can be an effective tool when used properly. Technology can be used by faculty to provide instruction to students, can be used by staff to perform daily tasks, and can be used by students to perform research. If an instructor, student, administrator, or staff member does not know how to use technology, they will be disadvantaged.

The College employs several methods to ensure that faculty and staff have access to training throughout the year. Training for staff is mainly focused around specific applications that are used for their daily duties including the ERP system, Unified Communications, and document management. Staff training can be provided by in-house experts and also by attending training provided by vendors or third party facilitators. Training for faculty includes FLEX activities focused on ways to leverage technology in the classroom. The College has several online training resources for students, faculty, staff, and management. The online training resources include content on the campus website along with subscriptions to third party online training resources. Professional Development is another avenue that provides training to faculty and staff.

III.C.5.

The institution has policies and procedures that guide the appropriate use of technology in the teaching and learning processes.

**Evidence of Meeting the Standard**

The District Board Policy 3720 and Administrative Procedure 3720 which describe appropriate use of the District’s technological resources[[36]](#footnote-36). Every year, users must agree to the acceptable use policy in order to proceed with portal use[[37]](#footnote-37).

As discussed in 3C.1, the institution has the program planning process whereby programs can request technology to assist in the teaching and learning process. While faculty best know what is necessary to facilitate teaching, since the requests are vetted through TRAWG and with the Technology Master Plan guiding the long-term vision of technology on campus, the process ensures that those items that are prioritized are appropriate. Through this process student services can also request software and hardware that will help achieve student success and equity[[38]](#footnote-38). Faculty and student services requests are prioritized through the Technology Request Allocation Workgroup (TRAWG). The Technology Master Plan guides the long term vision on campus in order to ensure that items requested are appropriately prioritized and support the overall mission of the College.

#### Analysis and Evaluation

#### The College follows all Board approved policies, procedures, and regulations regarding the appropriate use of technology in the teaching and learning environment. The District referenced an acceptable use template provided by the Community College League of California. Modifications were made to the template to reflect the mission and vision of the District. The acceptable use policy went through the ATAC committee and were adopted. Future versions of the acceptable use policy will include input from ITAC with adoption in ATAC. The addition of input from the ITAC committee will increase the participatory governance involved in modifying the acceptable use policy.

1. Strategic Technology Plan pg. 23-27 [↑](#footnote-ref-1)
2. **Item #1:** TRAWG 2012-13. TRAWG (Technology Resource Allocation Work Group) 2012-2013 Priority Ranking for Technology Requests **Item #2:** TCAP 3\_2013. Minutes for the March 2013 meeting of the F/TCAP committee. See Item #3, last bullet. **Item #3:** TRAWG 2013-14. Rankings from TRAWG. See TRAWG 2012-13 above for more details. [↑](#footnote-ref-2)
3. **Item #11** **TRAWG Criteria. The criteria used by TRAWG to prioritize requests.** [↑](#footnote-ref-3)
4. Strategic Technology Plan 2012-2015 [↑](#footnote-ref-4)
5. Screenshots [↑](#footnote-ref-5)
6. **Item #36:** ATAC meeting held on February 7, 2013, the ATAC committee discussed the issue of remote access to Banner for managers [↑](#footnote-ref-6)
7. Strategic Technology Plan pg. 24 [↑](#footnote-ref-7)
8. **need screen shot of TracDat on this** [↑](#footnote-ref-8)
9. **Item #13:** Business Survey;  **#26** A District wide survey of student perceptions is scheduled to be completed in 2015. An employee survey of the work environment is scheduled to be completed in 2015. [↑](#footnote-ref-9)
10. **Item #27:** There are several committees that help make decisions about technology services, facilities, hardware, and software. The committees’ descriptions and purpose can be viewed in the Strategic Technology Plan on pages 23-27. [↑](#footnote-ref-10)
11. http://www.moorparkcollege.edu/sites/default/files/files/departments/administrative/information-technology-services/moorpark\_college\_sla\_approved20120201\_b.pdf [↑](#footnote-ref-11)
12. **item #38: The following is an example of the number of simultaneous connections from 8:55am on January 13, 2015** [↑](#footnote-ref-12)
13. **item #28:** The description of the Distance Learning Task Force can be viewed on page 28 of the VCCCD Strategic Technology Plan. [↑](#footnote-ref-13)
14. **item #38: The following is an example of the number of simultaneous connections from 8:55am on January 13, 2015** [↑](#footnote-ref-14)
15. **Item #39:** The D2L system is upgraded on a periodic basis to add features and to update security. On page 1 of the following DLTF meeting notes discusses past upgrade processes. [↑](#footnote-ref-15)
16. Example of budget [↑](#footnote-ref-16)
17. **Item #50:** See Program Plans for the following disciplines: Art History (LED projector), Engineering’s request for technology, Film Studies received several pieces of equipment that has impacted the classroom; Astronomy’s request for telescope which it received; Biology request for better Wi-Fi in labs. [↑](#footnote-ref-17)
18. **Items #6 :** **ITAC 12\_2014.** ITAC (Instructional Technology Advisory Committee) Minutes for December 2014. See items 3 and 8. Item #7: ITAC 4\_2014. ITAC Minutes for April 2014. See item #3;  **item #38:** Description of server storage size [↑](#footnote-ref-18)
19. **item #2: TCAP 3\_2013.** Minutes for the March 2013 meeting of the F/TCAP committee (See Item #3, last bullet)**; Item 4: F\_TCAP 3\_2014**. Minutes for the March 2014 meeting of the F/TCAP committee. See Item #4. For III.C.1.c see Item #3, first bullet; item 5: F\_TCAP 11\_2014.Minutes for the November 2014 meeting of the F/TCAP committee. See Item #3, 2nd bullet. For III.C.1.c see Item #3, first bullet. [↑](#footnote-ref-19)
20. **Item #10:** Resource Allocation. Resource Allocation 2013\_14.pdf. This summarizes the requests that were processed by the F/TCAP Committee [↑](#footnote-ref-20)
21. **item #50:** See Program Plans for the following disciplines: Art History (LED projector), Engineering’s request for technology, Film Studies received several pieces of equipment that has impacted the classroom; Astronomy’s request for telescope which it received; Biology request for better Wi-Fi in labs. [↑](#footnote-ref-21)
22. **item #32:** The following is a snapshot of the vWorkspace platform used at Moorpark College. [↑](#footnote-ref-22)
23. **item #16:** Link to SLA [↑](#footnote-ref-23)
24. **item #49:** MDD-description of Program Plan process. Pgs. 22-24 [↑](#footnote-ref-24)
25. Logs and notifications from Foglight NMS [↑](#footnote-ref-25)
26. **Item #51:** Fall 2013 Flex week materials [↑](#footnote-ref-26)
27. Need evidence of trainings on campus [↑](#footnote-ref-27)
28. logs [↑](#footnote-ref-28)
29. Evidence/logs [↑](#footnote-ref-29)
30. **item #56:** Examples of Instructional DE/Tech training [↑](#footnote-ref-30)
31. **item #55:** Examples of Coffee Break fliers [↑](#footnote-ref-31)
32. **Item #57:** Examples of Faculty development of attendance to trainings [↑](#footnote-ref-32)
33. **Item #54:** Student tutorial and help pages- Available all of the time. [↑](#footnote-ref-33)
34. [↑](#footnote-ref-34)
35. **item #37:** List of computers available for student use [↑](#footnote-ref-35)
36. PDF of BP/AP 3720 [↑](#footnote-ref-36)
37. http://www.vcccd.edu/departments/information-technology/use-agreement-ap-3720 [↑](#footnote-ref-37)
38. Examples: DegreeWorks [↑](#footnote-ref-38)