Standard IIIC Technology Resources

The College recognizes the important contribution that technology makes to the success of its students by creating access to student services, supporting an engaging learning environment, and by contributing to efficient administrative operations. The College has balanced the investment in technology services and systems consistent with available funding and the demands of competing priorities. The College evaluates its technology to meet strategic goals, and it plans for implementation and improvement of these services in an on-going manner.

IIIC.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.

Description

The College invests in the technology services, professional support, facilities, hardware and software necessary to support a student-centric learning environment and an efficient business operation. This overall investment strategy has been guided by a Technology Master Plan 2012-2016 [IIIC.1-01]. The long-range technology plan is adjusted using input from the annual Program Review, Allocations, and Institutional Strategies for Excellence (PRAISE) process [IIIC.1-02], and tactical input from operational sources, including requests in the LiveTime ticketing system [IIIC.1-03], the Technology Committee [IIIC.1-04, IIIC.1-05], the Distance Education Advisory Committee [IIIC.1-06], and the Instructional Technology Committee [IIIC.1-07]. In addition to these operational sources, the Associated Student Body has provided technology goals as part of their annual goal setting and through student surveys [IIIC.1-08, IIIC.1-09].

The Information Technology Master Plan 2012-2016 provided the overall direction for technology investment during this period. 65 of 109 projects listed in the Master Plan have been completed. Technologies supporting academic functions and teaching and learning programs include 151 classrooms and learning laboratories with presentation systems and PCs for student use [IIIC.1-10]. Most buildings include WiFi connections to the College network for students and faculty using personal devices [IIIC.1-11]. The College uses CurricUNET Curriculum Management Software for Course and Program development and approval. TracDat 5 has been implemented as a tool to manage the overall Program Assessment Process. Course scheduling, enrollment, and record-keeping are done using the Ellucian Colleague ERP system. Schedule 25 scheduling software is being deployed to improve the class scheduling process. The Blackboard Learning Management System is used to support distance education and online learning. This system is hosted by a vendor.

Performance of Information Technology systems are part of the annual PRAISE cycle. Funding for regular upgrades to enterprise systems and College PCs is part of the annual budgeting process. Overall lifecycle replacement schedules are maintained by Information Technology Services and are used to inform the budgeting process [IIIC.1-12].

The DE Program has filed a Non-Instructional PRAISE report in accordance with BP 6200 (Budget Preparation) and AP 6200 (Budget Development) requesting specific technology and

software that can be used to meet their DE course needs [IIIC.1-13]. In addition, the College's IT department created, in Fall 2016, a tactical plan for implementing new and improved technology that apply to DE courses, personnel and students [IIIC.1-14]

In fall 2016, new computers for students were installed in the Advanced Technology Center. Ideally, DE students now have better computer tools at their disposal for completing both DE and traditional course work at the College.

A combination of vendor-hosted and locally hosted databases and applications are used to assist with efficient business operations. These include Financials 2000, Epic Human Resources Management, Ellucian Colleague Enterprise Resource Planning, and Microsoft Office and Microsoft Exchange. The College is evaluating the current performance of these systems in order to identify the best investment strategies over the next strategic planning cycle (2017-2022).

The Information Technology Service Department provides user support services through an IT Service Desk and instructional videos and guides on the ITS Website [IIIC.1-15]. The IT Service Catalog [IIIC.1-16] provides descriptions of the services available to staff, faculty, and students. It also gives directions on how to access those services, and where appropriate, Service Level Objectives (SLOs) for quality and timeliness.

In addition to feedback from internal sources, the College has engaged outside organizations to evaluate the quality of its technology services. PlanNet Consulting completed an IT Organizational Assessment in 2015, providing evaluation of technology services and personnel along with recommendations for improvement [IIIC.1-17]. In February 2016, the Board of Trustees approved a contract with Ellucian to provide technology management services for the College [IIIC.1-18]. The Ellucian team conducted an independent assessment of technology services in March and April of 2016 [IIIC.1-19]. These findings were in alignment with the findings of PlanNet Consulting. The external reviews identified issues with reliability, support, and security of College information technology systems. While the new IT management team is addressing these issues, many still exist [IIIC.1-20].

The College Library provides a wide range of technology-based resources to students and faculty. These include the Integrated Library System, the library online catalog, student study rooms and collaboration centers, and printer/copier services. The library technology investment plan has been guided by the Library Technology Plan [IIIC.1-21].

Evaluation

The College meets this standard. The demands for technology systems and services have increased substantially over the past five years. Desktop computer inventory has increased by over 25%, while many of these systems were also reaching the end of useful life. One-third of all of the College's PCs have been replaced during the past year. The PCs in teaching labs and classrooms were given priority. Plans are in place to bring all PCs to within lifecycle management timeframes over the next year. The demand for digital storage has also increased. A new SAN has been installed that not only increases storage capacity but also system responsiveness.

The pace of change in administrative technology and in teaching technology creates a challenge for the College. Administrative systems are increasingly interconnected, requiring data exchange processes that are reliable, secure, and near real time. Many of the business processes for the College are paper-based and manual. In order to reduce personnel costs and to provide more timely service to students, faculty, and staff, these processes need to be automated. The technical expertise needed for this work is scarce and costly.

Most of the college classrooms contain some technology. Many include smart boards and student PCs. Faculty are looking to introduce new teaching techniques that increase interactivity using wireless devices or allow students to use their own phones or tablets. These approaches will necessitate intelligent allocation of funds to build and maintain this infrastructure.

The College is investing in the systems and applications needed to build an engaging learning environment with efficient administrative processes. The Academic Senate and Information Technology Services are working together to identify the best choices for classroom technology. The College is working with Ellucian Technology Management to improve and automate business process and student services. Information Technology Services is working with the Library to update the technology available to students, staff, and faculty in the library. The results of these efforts will be reflected in the updated Technology Master Plan.

Updates to the Technology Master Plan are in progress. An overall framework for developing a revised plan was presented to the Technology Committee, and the area assessments outlined in this framework are in progress. The Academic Senate and ITS leadership have conducted a series of Town Hall discussions with College faculty to better define current and projected needs for instructional technologies. The ITS staff has evaluated projected infrastructure needs based upon current system performance and trends. External consulting support will provide greater insight into the costs and trade-offs associated with infrastructure choices. The College is also evaluating sources of grant money that might be used to improve network connectivity to lower campus and to the two remote sites. A similar approach will be used for applications and data infrastructure planning.

The College will continue the collaborative approaches to identify the technology needs for administrative processes, infrastructure, library technology, and academic technology. Updates to the Technology Master Plan will support budget decisions for FY 2017-2018. This will include valuating current business processes and identify opportunities for automation and improvement.

Action Plan

The College should consider updating the long-range planning process to regularly review the Technology Master Plan to ensure that it remains current with technology changes, organizational needs, and the realities of decisions made with each budget cycle. In this way, the Technology Master Plan will remain relevant as a guide to on-going technology investment decisions.

IIIC.1. Evidence

IIIC.1-01 Technology Master Plan 2012-2016
IIIC.1-02 IT PRAISE Report
IIIC.1-03 LiveTime ticketing system
IIIC.1-04 AP 1201
IIIC.1-05 Technology Committee Minutes
IIIC.1-06 Distance Education Advisory Committee Minutes
IIIC.1-07 Instructional Technology Committee Meeting Minutes
IIIC.1-08 Student Survey 2015-2016
IIIC.1-09 ASB Goals 2015, 2016
IIIC.1-10 IT Asset Management Inventory
IIIC.1-11 VVC WiFi Topology
IIIC.1-12 ITS Life-Cycle Replacement Plans
IIIC.1-13 Dean of Instruction Non-Instructional PRAISE Report
IIIC.1-14 ITS Tactical Project Plan
IIIC.1-15 ITS Website
IIIC.1-16 ITS Service Catalog
IIIC.1-17 PlanNet Consulting IT Organizational Assessment
IIIC.1-18 Ellucian Technology Management Contract
IIIC.1-19 Ellucian Information Technology Assessment
IIIC.1-20 Monthly ITS report to the President
IIIC.1-21 VVC Library Information Technology Plan 2010-2015

IIIC.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.

Description

Technology planning is done on both a tactical and a strategic basis. Information Technology Projects are approved three times per year for fall, spring, and summer execution [IIIC.2-01, IIIC.2-02]. The College has plan and projects costs for the life-cycle upgrades of all enterprise equipment such as servers, switches, classroom/lab and office PCs, and instructional technology over a 10-year cycle [IIIC.2-02]. These plans are updated and included in the annual tactical plans for budgeting and execution through the PRAISE process [IIIC.2-04, IIIC.2-02]. During the PRAISE process for the FY16-17 budget, only the Instructional Media Services division of the technology department provided any augmentation requests using PRAISE.

The annual process also includes a review of the IT Master Plan [IIIC.2- 04] to update projects as needed for changes in circumstances. Requests for projects not initially in the long-range IT plan may be requested by any department or through one of the technology committees [IIIC.2-05, IIIC.2-06, IIIC.2-07].

The College utilizes the DEAC as the main conduit of communication of DE program and service needs. In addition, the DE Facilitator is a member of the VVC Technology Committee. Evidence of evaluation of DE Program and Service needs are evidenced in the minutes of these two VVC committees [IIIC.2-08, IIIC.2-09].

The quality of technology infrastructure and service delivery is measured using performance benchmarks and Service Level Objectives. The results of this performance are measured monthly by the technology management team and reported monthly to the President's cabinet [IIIC.2-03].

Infrastructure lifecycle planning is based upon a 10-year cycle to balance technology refresh with affordability. The technology refresh budget is reviewed as part of the annual budgeting process, using the technology refresh plan as a guide. In FY 2015-2016 and FY 2016-2017, additional funds were expended on infrastructure improvements and refresh to make up for lower investment in prior years [IIIC.2-02, IIIC.2-10, IIIC.2-11].

Evaluation

The College meets this standard. A new cycle of long range planning is in process. A replacement for the Information Technology Master Plan 2012-2016 is needed to support the FY 2017-2018 PRAISE Cycle and investment priorities. The new Technology Plan should include planning for instructional, infrastructure, business operations, and library technologies.

The College reviews and updates infrastructure investment needs as part of the annual PRAISE process. This process also identifies the projects scheduled for the upcoming year. In the fall of 2016, the Technology Committee approved a process for tactical planning of projects three times per year. This change also provides a way to introduce projects submitted outside of the PRAISE cycle. Information Technology Services has drafted a recommended information technology request process that will allow new projects to be considered as part of the tactical planning process three times per year.

Action Plan

No Action Plan Required

IIIC.2. Evidence

IIIC.2-01 Information Project Planning Process
IIIC.2-02 Technology Life-cycle Replacement Plans
IIIC.2-03 Monthly ITS report to the President
IIIC.2-04 Technology Master Plan 2012-2016
IIIC.2-05 PRAISE Reports and Decisions
IIIC.2-06 Technology Committee Notes
IIIC.2-07 Live Time Ticketing Project Requests
IIIC.2-08 Technology Committee Meeting Minutes
IIIC.2-09 DEAC Meeting Minutes
IIIC.2-10 Information Technology Budget FY 2015-2016

IIIC.2-11 Information Technology Budget FY 2016-2017

IIIC.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.

Description

In addition to the main campus, the College supports information technology at 3 remote locations. All of these locations are supported through central Information Technology Services. Service Level Objectives define support expectations for these sites [IIIC.3-01]. In addition, the Information Technology Services staff makes regular visits to these locations to inspect network systems and to hear from the staff regarding any issues they may be experiencing [IIIC.3-02]. Issues with systems at these locations may also be identified through the IT Service Desk.

The network connections at these remote locations do not have the same bandwidth capability that is provided to the main campus. The connections to the Regional Public Safety Center and to the Southern California Logistics Center are provided via a microwave link, which limits the available bandwidth. The College is working to develop higher capacity connections to these locations [IIIC.3-03].

Information Technology Systems are maintained using a regular schedule of monthly maintenance, supplemented by special maintenance periods when longer system downtime is necessary. All enterprise systems and data are backed up using continuous disk-to-cloud processes. This system can then be used to restore data to the College data center or to another location if the data center became unavailable. Many of the college processes are provided using cloud-based applications, allowing anytime-anywhere access to these tools.

Hardware and software security is provided using industry standard approaches to physical security and data security. Formal change management and development approaches provide protection from unauthorized access or data corruption. The College has enterprise class firewalls and anti-virus/anti-malware software to protect data and systems.

Evaluation

The College meets this standard. As more classes are taught at the Regional Public Safety Training Center, bandwidth, infrastructure, and classroom technology needs will increase. These capabilities and operational support for these systems will be needed.

The existing systems and procedures provide a high level of reliability, safety, and security for the College systems and data. Operational experience, including system monitoring and real world events involving malware and power failures, demonstrates the resilience of the current design. Regular, periodic auditing would help identify weaknesses with respect to current technology trends and threats. The results of these audits could then be used as part of the PRAISE process.

All College systems are part of a long-range technology refresh program. This program is designed to minimize failures from aging equipment or introduce vulnerabilities through failure to keep pace with industry standards. Funding constraints have led to the delay in upgrading some systems. Changes in the external technology environment, including increasing data integration, security requirements for remote applications, and cloud-based services need to be factored into long-range plans.

Action Plan

No Action Plan Required

IIIC.3. Evidence

IIIC.3-01 IIIC.3-01 Information Technology Service Level Objectives
IIIC.3-02 IIIC.3-02 Notes from Visits to Remote Site
IIIC.3-03 IIIC.3-03-Remote Site Bandwidth Analysis

IIIC.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.

Description

The College professional development program is available to all staff and faculty who want to take classes in any area of technology relevant to their job [IIIC.4-01, IIIC.4-02]. In order to upgrade Information Technology Services staff and Student Services staff on the operation and maintenance of the Colleague ERP system, the College invested in six weeks of on-site training conducted by Ellucian consultants in system configuration and business processes [IIIC.4-03]. The California Community College Chancellor's Office has made online training in many areas of technology available to all faculty and staff through Lynda.com [IIIC.4-04]. The IT Service Desk provides a variety of User Guides for common technology processes [IIIC.4-05].

The Academic Senate has partnered with Information Technology Services to provide faculty with updates on technology trends that impact teaching and learning. The College has invested in a Center for Institutional Excellence to promote excellence in student learning, educational practices and quality of services by establishing and maintaining a campus culture of self-evaluation and improvement at all levels of the institution [IIIC.4-06].

Information Technology Services staff receive regular opportunities to upgrade and update their technical skills through attending seminars or through formal training classes [IIIC.4-07]. This training is scheduled on an annual basis as part of the budgeting process. The department takes advantage of ad hoc or vendor-provided training when possible.

DE professional development and technology training is included in the current DE Plan (2012; under revision 2016). It provides the baseline needs for information technology training related to DE [IIIC.4-08].

For the past 5 years, training opportunities in Blackboard, Google Docs and other technology-based tools have been a part of DE Academies, workshops, convocation and in-service days, and other public forums. The College has offered several other options for training on the current LMS, pedagogical training, current trends in DE, and other relevant topics. These trainings and workshops are not only valuable for DE personnel, but traditional, face-to-face personnel have also attended these workshops; many face-to-face personnel use the LMS in their courses for additional resources for students [IIIC.4-09, IIIC.4-10, IIIC.4-11].

In addition, beginning with the fall 2016 DE Academy, the VVC Academic Senate and the IT department will host "IT Forums" where college personnel can share their instructional technology needs [IIIC.4-12].

Most instructors alert students to the use of Blackboard in their DE courses, and for an example of a "welcome letter" to students with information on the LMS and other elements needed for successful completion of a VVC DE course [IIIC.4-13].

Evaluation

The College meets this standard. Changes in technology and personnel turnover necessitate on-going investment in staff training. Along with improvement to business processes, this training can improve operational efficiency and service quality. Students and staff need easily accessible guides for access to and use of available technology. Improving the instructions on technology use for student and staff will improve the both the administrative and learning experience of students.

Long-range training plans are needed to help guide the overall investment made by the College in the understanding and use of information technology.

The Professional Development Committee coordinates the overall training programs for staff and faculty. Participation in regional and national training events are approved as funding permits. If more funding were available, additional training opportunities could be provided. Addition of the Lynda.com training site will increase the availability of training on technical topics for all staff and faculty. The Information Technology Services Department provides user guides for use of many enterprise systems and continues to add to this library on the ITS website [IIIC.4-14].

Establishing the CFIE and CFIE classroom creates an environment for a variety of faculty training sessions, including training on classroom technology, teaching practices, and instructional support technologies.

Action Plan

No Action Plan Required

IIIC.4. Evidence

IIIC.4-01 Guidelines for Employees Professional Development Fund Requests
IIIC.4-02 Faculty/Staff Training Records
IIIC.4-03 Work Order for Colleague ERP Training provided by Ellucian
IIIC.4-04 Staff directions for use of Lynda.com
IIIC.4-05 IT Service Desk User Guides
IIIC.4-06 CFIE Website
IIIC.4-07 Information Technology Services Training Records
IIIC.4-08 Distance Education Plan
IIIC.4-09 DEAC LMS Information
IIIC.4-10 Distance Education Academy
IIIC.4-11 Distance Education Workshops
IIIC.4-12 IT Forums
IIIC.4-13 Welcome Letter
IIIC.4-14 ITS User Training Guides

IIIC.5. The institution has policies and procedures that guide the appropriate use of technology in the teaching and learning processes.

Description

The Board of Trustees has directed the Superintendent/President to establish procedures that provide for appropriate use of information technologies [IIIC.5-01] and for providing disabled students with accommodating technologies [IIIC.5-02]. The College has implemented these Board Policies in appropriate Administrative Procedures [IIIC.5-03, IIIC.5-04, IIIC.5-05]. The College has established a Technology Committee as part of the shared governance structure to provide recommendations for information and communications technology investment and to monitor adequacy of current technology to support instruction, students and staff [IIIC.5-06]. The Information Technology Services management team provides the Technology Committee and the Management Committee with regular feedback regarding current projects and levels of service [IIIC.5-07, IIIC.5-08].

The Vice President Student Services and Instruction chairs an Academic Technology Committee that evaluates technical tools for the administration and assessment of instruction, program evaluation, and scheduling. This Committee evaluated and recommended new applications, including Series 25 scheduling software, TracDat program assessment software, and CurricUNET curriculum management software [IIIC.5-09]. This same team continues to evaluate the effectiveness of these choices as this software is being used. The results of these selections become programs funded through the PRAISE process and included in the Information Technology Master Plan [IIIC.5-10, IIIC.5-11].

The long-range planning process for information technology includes a review of technology trends and needs for teaching and learning [IIIC.5-07]. The Chief Information Officer and members of the Information Technology Services Department have held a series of town hall faculty discussions of classroom technologies and planning for the tools provided to support

teaching and learning. The recommendations from this discussion will be used in the next PRAISE cycle and will become part of the Information Technology Master Plan [IIIC.5-10, IIIC.5-11].

Most classrooms include a baseline set of technology that includes the capability to project from a PC or DVD player. Many classrooms include smart boards that allow annotation and interaction with projected material. All of the classroom systems are maintained as part of the ITS lifecycle management program [IIIC.5-12].

Evaluation

The College meets this standard. The College has developed policies and procedures for the use of technology in the teaching and learning process. These access control, data handling, password, and security standards. These policies are reviewed as part of the on-going practice of reviewing policies as part of the annual program assessments.

Action Plan

No Action Plan Required

IIIC.5. Evidence

IIIC.5-01 Board Policy 3720, Computer Use
IIIC.5-02 Board Policy 5140, Disabled Students Programs and Services
IIIC.5-03 Administrative Procedure 3720(a)
IIIC.5-04 Administrative Procedure 3720(b) – Computer Use – Email Procedures
IIIC.5-05 DSPS Website
IIIC.5-06 AP 1201
IIIC.5-07 Tech Committee Meeting Minutes
IIIC.5-08 ITS Presentations to Management Committee
IIIC.5-09 Academic Technology Committee meeting minutes
IIIC.5-10 Technology Master Plan 2012-2016
IIIC.5-11 PRAISE Reports and Decisions
IIIC.5-12 ITS Life-Cycle Replacement Plans