Lake Tahoe Community

College

Office of Information Technology Services

A Technology Master Plan for 2012 – 2017

9 June 2012

Communicate + Collaborate

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Executive Summary

In November of 2011, Lake Tahoe Community College (LTCC) partnered with Strata Information Group (SIG) to begin development of an information technology master plan which was to include all aspects of capital planning (see Appendix "C"), staff planning, organizational structure, and technology governance. The institution's mission statement and recently completed strategic plan provided the context for the technology strategic planning process, which had the twin goals of further advancing the College's technological progress and ensuring consistency between the College's technology development and its overall strategic direction. The President appointed a Technology Master Planning Committee (TMP) to work with the SIG consultants to develop the master plan. As a result of these efforts, a plan was developed that provides the College with a shared technology vision and set of guiding principles; related planning assumptions; and objectives and actions for realizing the College's strategic vision for technology.

Technology Master Planning Committee Members

Julie Booth, Confidential Staff
Cathy Cox, Faculty
Kurt Green, Dean of Instruction
Larry Green, Faculty
Tom Greene, Vice-President of Academic Affairs and Student Services
Cheri Jones, Interim Executive Director of Technology and Education Services
Bill King, Interim Manager, Data Warehouse and Reporting
Aaron McVean, Interim Vice-President of Administrative Services
Carol Merkley, Classified Staff
Kindred Murillo, Superintendent/President
Lisa Shafer, Confidential Staff
Mike Spina, Faculty
Christina Tomolillo, Faculty

In January 2012, the TMP met to develop the overall technology governance structure. That structure is detailed in this plan. Throughout the planning process, the SIG consultants interviewed numerous campus stake-holders including both academic and administrative personnel as well as facilitated focus group discussions with students, faculty and staff. The input received from these conversations provided significant confirmation of issues and priorities impacting technology support and services at the College. The actions developed in this plan are driven from the feedback of these interviews and focus groups.

Major Findings

There has been a lack of strategic direction to guide technology. As a result, the college has been experiencing:

1) Decentralized technology functions
2) Insufficient staffing and support services
3) Substandard equipment with no refresh cycles
4) Exposure risks to security of systems
5) Ad hoc and inconsistent technology purchasing decisions

Significant Recommendations

Based on the findings, existing conditions, and desired future state of the college, are the following significant recommendations:

1) Implement strategies over multiple years (exhibit C)
2) Centralize technology functions as the Office of Information Technology Services (OITS)
3) Centralize all technology functions to include Datatel implementation, computing services, and outsourced IT services under the newly created Interim Executive Director of Technology and Education Services (ED)
4) Implement a client-centric support services model
5) Reclassify existing staff positions and immediately recruit a Sr. Technical Administrator Position and evening support position
6) Implement Voice Over Internet Protocol (VOIP) phone system
7) Immediately implement technology refresh plan with a three year ongoing cycle
8) Phase out terminal server and implement alternative technology
9) Continue to review and analyze the in-sourcing and out-sourcing of both existing and new systems and applications
10) Address performance issues with faculty and staff email system

The technology vision, stated below, describes the ideal future state of technology at Lake Tahoe Community College. It defines the extensive role the College believes technology will play in its continued success. Also presented are the guiding principles for technology decision-making that will serve as touchstones for the institution as it evaluates the technology needs, priorities, and plans on an ongoing basis. Through the application of these principles, the College will ensure that its decisions regarding technology are consistent with the College Strategic Plan, Educational Master Plan and aligned with the Facilities and Resource Plans. In Attachment "A" the mission, vision, beliefs, goals and objectives, which comprise the Strategic plan of the College, are restated. This plan bridges the gap between the College's current environment as defined by its planning assumptions and its ideal technology future as reflected in its shared technology vision. The alignment of technology objectives to the College's strategic plan are demonstrated in Attachment "B," "Strategic Alignment."

Information Technology Vision

Lake Tahoe Community College effectively integrates technology into teaching, learning, research, administration, co-curricular activities, and professional development to ensure the growth and success of students, faculty, and staff. We accomplish this through:

1) Maintaining a learner-centered philosophy;
2) Enhancing outcomes through engaging students, faculty and staff in collaborative technologies;
3) Providing progressive mentoring of faculty and staff;
4) Reducing barriers of geography, connectivity, and availability;
5) Embracing diversity;
6) Building partnerships; and
7) Realizing the advantages of our location and community.

The Office of Information Technology Services Planning Strategy

The Office of Information Technology Services (OITS) seeks to provide the highest quality technology-based services, in the most cost-effective manner, to facilitate the goals of the College.

This is accomplished through a commitment to the core values of the College by setting measurable objectives; realistic actions to support those objectives; providing a flexible, client centric support structure; and adhering to a broad based communication + collaboration branding and communication methodology.

OITS Objectives in Support of College Goals

1) OITS must support teaching and learning through effective software tools, technology enriched classrooms and labs, and cost effective and responsive support services.
2) OITS must be a market leader for enhancing the student experience in support of the many faceted services provided for students.
3) OITS must promote the effectiveness of operational and administrative functions of the college through the provision of robust technological tools, reporting capability, and reliable network services.
4) Effective strategies for communication and collaboration across constituencies must be nurtured for OITS to be able to foster efficiencies and adapt effectively to changing information technology needs.
5) To retain professional staff and maintain effective technology operations, OITS must have systematic training, professional development, and promotion tracks.
6) OITS must effectively operate an increasingly complex infrastructure supporting the changing computing and communications needs of the College.

Information Technology Guiding Principles

Institutional uses of technology at Lake Tahoe Community College shall:

1) Support and enhance the sense of community throughout the college and its service area;
2) Provide effective and barrier-free access to teaching and learning;
3) Ensure that all students, faculty, and staff have access to excellent services that are consistent, convenient and help to create the best conditions for supporting learning;
4) Strive for seamless integration of systems and technologies to maximize operational efficiency and effectiveness;
5) Promote student, faculty, and staff satisfaction, professional development, and retention;
6) Provide technology training and support in ways that will enhance the use of technology in fulfilling the mission of the College;
7) Promote partnerships, both internally and externally; and
8) Address diversity in all areas of education, culture, learning styles, and learning needs.

OITS Planning Assumptions

There are wide ranges of assumptions that are defined which provide the context of both the current influences on the College as it relates to information technology as well as the context of areas where change is forecast or where little change is anticipated. The general planning assumptions for creating a technology Master Plan include:

1) As technology has become increasingly ubiquitous, diverse and mobile, the decentralized technology support model is no longer effective in providing the coordinated, proactive and visionary services required. The centralized model where one office works in coordinated and collaborative ways with the entire constituency of the College to develop, maintain and support technology is essential if the College is to meet its technology objectives within the budgetary and staffing constraints that will continue to impact the College throughout the term of the plan.
2) The pervasiveness of handheld, highly mobile communication and computing devices among campus constituents will continue to evolve over the period demanding changing actions for support, integration and connectivity to campus resources.
3) The various components of the ERP system will require a strong continuous improvement process as imaging, workflow, multivendor and in house developed systems become increasingly integrated into the real-time operational environment.
4) Security and privacy needs will continue to evolve over the period and require broad based user education and a high level of OITS technical expertise to effectively meet needs for ubiquitous access while managing information security concerns.
5) Security and privacy needs are not OITS specific responsibilities. All faculty and staff share in the responsibility to maintain College data as well as student and employee privacy.
6) Needs for effective collaboration technologies and reporting strategies will continue to increase over the next five to ten years.
7) For every central adoption of a new technology service or application on campus, sufficient funds will be invested to ensure adequate user training and support.
8) Capital funding will be competitive within the College and offers opportunities for effectively funding planned, administratively sponsored projects.
9) OITS will be managed as cost effectively as possible to mitigate and/or offset significant funding constraints.
10) Collaborative solutions on and off campus including shared data center services and cloud computing are important strategies to maximize technology investments and institutional outcomes--both for learning and business operations.
11) Long-term success ultimately is based on a commitment to shared values, principles, and objectives of the College as well as allocation of budget resources and adequate staffing levels that consider business needs and supporting technology in a holistic manner.

Assumptions about Students

1) Students vary widely in terms of their computer literacy, both when they arrive at the College and as they progress through their education – the "digital divide" still exists among students.
2) Students may be unaware of or unable to use the technology resources available on campus.
3) Many LTCC students:
    a. Are first-generation college students;
    b. Live in areas without affordable Internet access, or Internet access at all;
    c. Speak English as a second language;
    d. Come from low-income backgrounds; and
    e. Are not fully prepared for the academic challenges of higher education.
4) Students need support in order to progress in their use of technology for learning; they need more hands-on technology training early in their academic careers in order to develop into independent learners later.
5) The number of online students has expanded although a significant portion of the students take both online and on-campus courses.
6) Severe winter weather can make it difficult for students to get to campus which makes remote access to services important.
7) Technology initiatives at many high schools are exposing our students to emerging technologies before they reach LTCC with some school, such as South Lake Tahoe, offering very high levels of technology integration in the K-12 educational experience.
8) Students will continue to experience greater exposure to technology throughout the curriculum as they advance throughout their higher education.
9) The college has to address the needs of non-traditional students for technology education and support.

Assumptions about Faculty and Staff

1) Faculty and staff vary widely in terms of their technology knowledge, needs, skills, and experience.
2) Some faculty and staff may resist the integration of technology into their operations and activities.
3) Faculty and staff may need incentives to pursue technology professional development and to use technology as a standard communications tool.
4) Faculty and staff require a variety of training options and flexible hours for technology professional development.
5) The College must address technology-training needs related to faculty and staff turnover.
6) The local workforce from which the College must hire staff is under-prepared for a technology-based work environment.
7) Many faculty and staff work on projects and regular responsibilities from a home office and need computing resources (hardware and software) that are consistent and up to date.

Assumptions about the Local Community

1) Some of the service area lacks affordable high-speed Internet access, and most likely will not have affordable access in the foreseeable future.
2) There is a significant need for technology training opportunities, and local communities lack technology support, particularly in outlying regions.
3) The College has increased its service to the region through online education, and continues to expand online education offerings.
4) The communities need to be made more aware of the College facilities and programs available to them.
5) Employers in the College service area need an educated, skilled workforce.
6) Local communities benefit from the economic impact generated by the College.

Assumptions Regarding Resources

1) The College continues to operate in an environment where state funding resources are diminishing and alternate resources for funding are required.
2) The College needs to update existing facilities as the first priority and then in the longer term look at implementing more technology-enabled collaborative classrooms.
3) The College faces ongoing resource challenges in terms of available skills and market pay;
4) Efficient use of technology support staff is essential;
5) Current technology staff have expertise, but are not always available due to work load and support of multiple areas;
6) The College administration is open to new ideas and pro-active approaches to meeting resource constraints;
7) To the extent feasible, technology resources should be made available on a campus-wide, as opposed to an individual department basis—thus taking a more coordinated approach with a shared view towards effective collaboration;
8) More consistent resources are needed to ensure timely replacement of computers (i.e., on a standard lifecycle basis);
9) Grant funding is currently an important source of support for technology and will continue to be so in the future; and
10) The College has made progress toward a fully integrated campus technology environment.

Current State of Technology at LTCC

Through inventory data and assessment; feedback from interviews and focus groups; analysis of LTCC procedures in comparison with related higher education best practices; and facility and policy reviews, the following list of issues have been identified as significant drivers to the development of reorganizational priorities, technology objectives and actions intended to best address the technology needs of the College.

1) The lack of strategic direction for technology has led to a computing environment that has large numbers of faculty and staff with substandard computers and very limited support.
2) There is no on-site support for evening classes when many faculty and students are on campus.

3) The College has significant exposure to security related issues due in part to third party contracts with inadequate service level agreements and due to the lack of internal system administration oversight. This drives an urgent need for at least one high level technical administrator to oversee the infrastructure, password management, and third party vendor performance.

4) In large part because faculty computers are frequently out of date and operating systems and office suite software is out of date across the entire campus, students perceive that faculty are not up to speed on the use of technology though they appreciate most are doing the best the can with what they have to work with.

5) There is a general sense across the campus that more training needs to be provided for software applications. This is exacerbated by the older and slower applications still in use. While the College participates in the Microsoft Campus Agreement, the benefits of that licensing are not being utilized. There is a significant need to make a concerted effort to keep the College current on operating systems and software.

6) As learning management systems (LMS) becoming increasingly used across the campus for both on-line learning and resources for traditional classroom instruction, the College should evaluate the on-going development and feature sets of several LMS vendors to find the most cost effective and robust system for the College towards the goal of supporting one LMS for on-line and traditional instruction.

7) Technology purchasing decisions have been made too ad hoc over time and need to be viewed more to a broader enterprise resource view. As one example, the wireless infrastructure was purchased without the enterprise licensing required to properly configure the units to work together efficiently in a distributed environment. This has resulted in oversubscription and dropped connections as all units use the same band.

8) The Meridian PBX and the Voyager library database system are examples of non-centralized technology systems that have been largely neglected over time. In the case of the Meridian PBX, the non direct in-dialing, expensive local toll calling rates, outdated routing tables and inadequate trunking have created an expensive to operate system with very low user satisfaction. In the case of Voyager, the lack of database administration skills has led to duplicate records and other anomalies in the database.

9) Facilities is issuing bar coded asset tags to equipment when technology is received. However, the bar code has not been developed into an electronic database. The technology assessment included a room-to-room inventory to match asset tag with user and model number. As a replacement plan is developed, this asset tagging system should be the key identifier for asset management, and a bar-scan integrated database system developed for on-going management of assets.

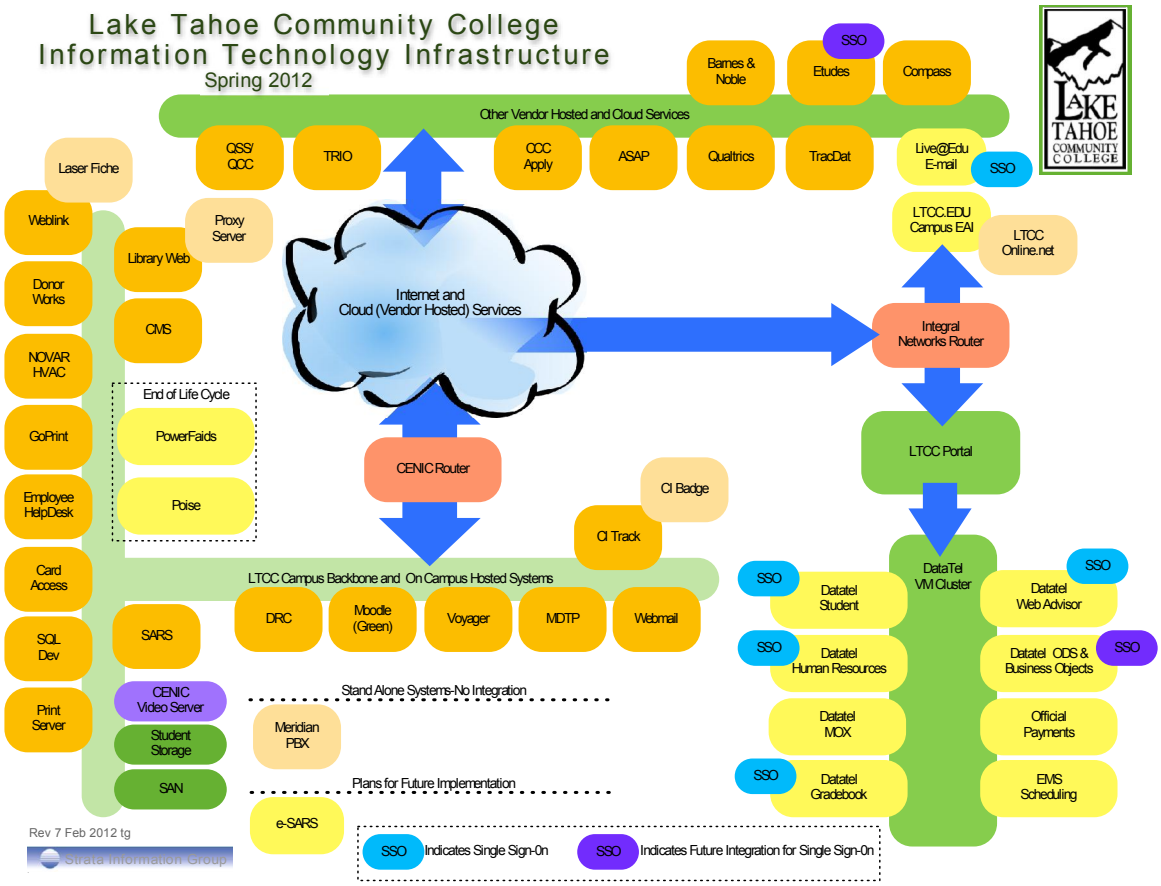
10) Students expressed the need for better access to printing in general and color printing specifically. During the inventory assessment, it was noted that there are many printers and copiers on campus and for the next two to three years these could be allocated in ways to address the immediate concerns of students. By 2014-15, it is recommended a distributed printing/copying plan be implemented on a fair market lease refresh.

11) There is widespread dissatisfaction with terminal services. There are infrastructure and support considerations that will impact any type of virtual desktop services for the College. In the short term, the plan recommends that terminal services be eliminated to the extent that is practical as new systems are purchased—noting that remote access is critical via terminal services or other technologies. It is recommended that new systems be loaded directly with office suite software.

12) There are electrical infrastructure issues that should be addressed for the long term stability and availability of technology resources. Specifically, the telecommunications room located in "A" wing and the server room located in "D" wing do not have any generator back-up. Providing such back-up for one or the other of the rooms is inadequate as both are needed to connect users to services on campus and in the cloud for systems hosted off campus. Also, there are many conference rooms, classrooms and open access areas with inadequate access to power for laptops. No provision is made for these infrastructure costs in the plan as it is recommended the issues be addressed in the Facilities Master Plan.

Existing LTCC Technology Infrastructure

The following diagram shows the 'as is' state of applications and systems that support technology operations across the college. It further illustrates the current state of where those applications and system reside including on the network backbone, vendor hosted solutions and those under the hosting management contract with Integral Networks. Poise and PowerFaids will be phased out over the coming 2-3 terms as Datatel becomes the authoritative system for student admissions, registration and financial aid. It is anticipated that a voice over IP (VOIP) system will replace the non-integrated Meridian PBX by the end of 2012-13. Support and development of the remaining applications and systems will continue through the normal review, upgrade, replacement and decommissioning process as the plan is implemented.



Office of Information Technology Services Organizational Structure

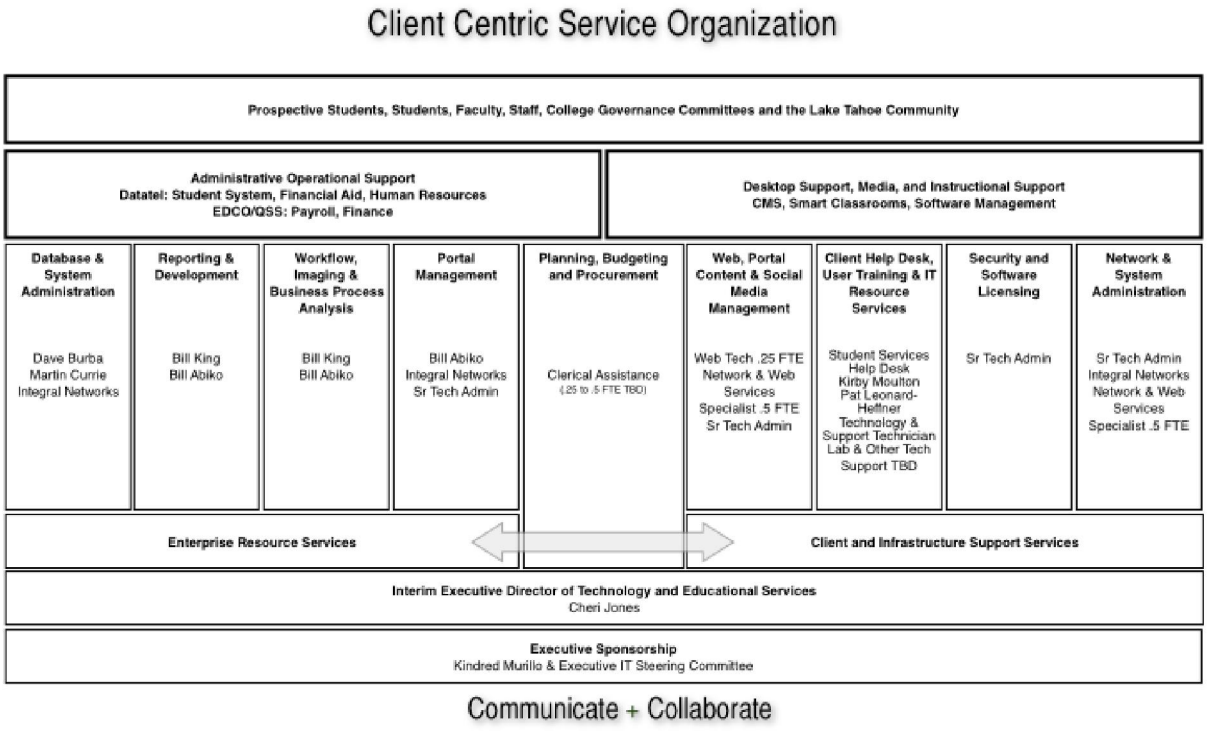
Hierarchical models of support with one point of contact do not meet the needs of many constituents, especially those with high levels of expertise and deadline driven projects. Hierarchical models include other limitations such as:

1) Policy is set by the same people who provide support and services, and constituents have no clear way to influence support policies with which they disagree.
2) There is a lack of appreciation for the diversity of the constituent base and for the diversity of the needs of the constituents.
3) There is an inherent lack of transparency that destroys trust in the organization.

The client centric model implemented in February 2012 provides an open structure where:

1) We develop policy and governance independently from specific support structures.
2) We open lines of communication to understanding the constituent's point of view in order to meet their expectations and needs.
3) We work as consultants in partnership with constituents.
4) We plan interactively with constituents through the use of service level agreements.
5) We allocate resources in alignment with policy and governance decisions.

This organizational structure is represented in the following diagram as a cross-cooperating matrix where the various constituents are defined at the top of the organizational structure and move through the organization to the executive sponsorship of technology.



OITS Staff Reclassifications

The following chart provides the one-to-one match of existing staff with the new organizational structure. The intent of the reclassifications is to accurately match responsibilities with skill sets and expectations as well as identifying the additional staff requirements to support the plan.

Current Title/FTE		Proposed Title/FTE		Description of Change	FTE Variance
Director of Computer Services (King)	1.0	Currently interim, to be determined based on institutional needs	1.0	To be determined	None
Computer Programmer/ Analyst II (Burba)	1.0	Sr. Integration Analyst	1.0	Change title and reclassify to reflect lead role in ERP integration	None
Computer Programmer/ Analyst II (Currie)	1.0	Systems ERP Programmer/Analyst	1.0	Title change only	None
Programmer I (Abiko)	1.0	Systems Programmer/Web Applications Developer	1.0	Change title and reclassify to reflect increased responsibility related to portal, WebAdvisor, and other systems	None
Computer Systems Technician (Moulton)	1.0	No change	1.0	No change	None
[new position]	n/a	Technology & Media Support Technician	1.0	Add position to provide evening coverage for instructional media and low-level technical support	1.0
LAN (Local Area Network) Administrator (vacant)	1.0	Network and Web Services Specialist (title may vary based on final job description)	1.0	To be determined – expected to provide technical functions related to web, portal, network/system administration	None
[new position]	n/a	Sr. Technical Administrator	1.0	Add position with high level expertise in network/system administration, security, and licensing	1.0
[new position – currently filled on an interim basis]	n/a	Title to be determined (functions as part-time CISO/ other administrator-level duties TBD)	.50	Add position at .50 FTE in I.T. with the remaining .50 FTE to be allocated to other institutional needs	1.0 total with .50 FTE allocated to oversight of I.T.
[new position – currently filled on a temporary basis]	n/a	Title to be determined (clerical support)	.50	Add administrative assistant position; title to be determined based on the split configuration of the CISO position	.70 total with .50 FTE allocated to support I.T.
[new or reassigned support function]	n/a	Web Technician	.25	Provides support for the LTCC web site, social media, and other web-based applications	
Media Specialist (Leonard-Heffner)	1.0	No change	1.0	No change	None

OITS Staff Development
To strengthen the College's technology resources, OITS is committed to expanding the training and user interactions for OITS staff through greater involvement with user groups such as Datatel's DUG; Educause, learning management user groups, etc. Additionally, industry provided training via computer based training or classroom conducted training will be included to enhance the ongoing professional development of staff.

OITS Communication Strategies
OITS is committed to improving overall communications to the campus through:

1) More effective management of listservs and campus-wide emails;
2) Use of the portal and social media;
3) Greatly expanding training opportunities;
4) Quarterly online newsletters;
5) Use of client satisfaction surveys; and
6) Interaction with governance committees.

What Is Information Technology Governance?
Information technology governance is the framework for defining how information technology policies, resources, and architectures are established, deployed, managed and enforced. Information technology governance is designed to achieve a partnership between the individual units within the College and the OITS by:

1) Establishing a shared vision of how information technology can add value to the institution;
2) Establishing institutional information technology objectives and actions for achieving these goals;
3) Establishing principles and guidelines for making technology decisions and managing technology initiatives;
4) Establishing, amending and retiring, as necessary, institutional technology policies;
5) Determining the distribution of responsibility between the technology organization and constituents;
6) Determining technology resource allocations;
7) Establishing and communicating institutional technology priorities;
8) Guiding the management of institutional technology initiatives;
9) Guiding the work of the technology organization; and
10) Providing a vehicle through which members of the constituent community participate in information technology planning.

What is The Role of the Information Technology Organization in technology Governance?
The role of the Office of Information Technology Services (OITS) in technology governance is to:

1) Manage day-to-day activities and projects;
2) Establish, maintain, and support the technology infrastructure of the institution;
3) Ensure adequate security and risk management policies are effectively incorporated in strategic initiatives and day-to-day operations;
4) Provide the human resources to support end-users across the institution;
5) Manage the financial resources the College has allocated to support technology; and
6) Research and recommend technological solutions for consideration by the technology governance committees.

How does the Governance Structure Shape the Mission of the OITS?
The Office of Information Technology Services is committed to providing the entire College community with support for the effective use of technology. This support is provided through a program of thorough training, responsive service, infrastructure and systems development, and inclusive project planning.

The staff of the OITS form a team committed to providing users with continuously improving services through open communications and collaboration. The OITS Core Management Team makes every effort to ensure that resources, both human and material, are developed and shared.

Information technology is a means and not an end in itself; therefore, technology supports the mission of the College by enabling students, faculty, and staff to achieve their academic and administrative objectives. The effectiveness and inclusiveness of this support, and the planning that makes technology possible, are ensured through the constituent-based technology governance committees. These committees are responsible for working internally and with each other to identify technology issues and trends of significance to the College; engage OITS collaboratively in developing related recommendations and plans; and provide ongoing feedback regarding the effectiveness of such efforts to ensure their success.

What is the Technology Governance Structure for Lake Tahoe Community College?

Technology Council
Purpose: The Technology Council provides oversight for development and implementation of the college's technology strategic plan as well as the initiatives of the Board of Trustees. The committee acts on the proposals and recommendations submitted by the Office of Information Technology Services (OITS) and the technology governance committees. These proposals and recommendations may be approved, rejected, or returned to the recommending committee for modification. Additionally, the committee recommends and reviews technology related policies and procedures.

The Technology Council resolves any prioritization, resource allocation, and standards or policy conflicts that cannot be resolved by the OITS in working with the governance committees. The Technology Council ensures that technology initiatives are consistent with college goals, priorities, and resources; and appoints project teams for approved projects.

Representation: Vice-President of Academic Affairs and Student Services; Executive Director of Technology & Education Services; Director of Research and Planning; Management (1); Faculty (3);

Confidential staff (1); Classified staff – CES appointment (1)*; Classified staff – CEU appointment (1)*; and Student (1)
Appointment Term: Ex-Officio and/or one-year term
Frequency: The Technology Council convenes as needed.
Co-Facilitators: Executive Director of Technology & Education Services; a co-facilitator designated and rotated annually among the constituencies
***Note:** Priority for one of the CES or CEU appointments is to be granted to staff from the Office of Information Technology Services

Internet, Portal & Social Media Advisory Committee
Purpose: The Internet, Portal and Social Media Advisory Committee reviews information technology plans and projects that directly support prospective student, student, faculty and staff access to information resources, as well as the college's general progress in this area. The issues addressed by this committee include management strategies for online resources, communication strategies, developing policy and procedures to ensure appropriate levels of privacy and use, and oversight of marketing and branding as it relates to online resources. The committee establishes project teams and task-force groups as necessary to research issues relevant to its scope and develops initiatives for addressing the issues. The committee submits its analyses and recommendations to the ED for review and submission to the Technology Council.

Representation: Vice President of Academic Affairs or Dean of Student and Academic Services, Public Information Officer, Enrollment Services appointments (2), Faculty Academic Senate appointments (2), Associated Student Council appointments (2), ED appointment, Administrative Services appointment and Human Resource appointment.
Appointment Term: Annual; members may be appointed for multiple terms
Frequency: This Committee meets quarterly or as needed.

Instructional Technologies and Learning Support Advisory Committee
Purpose: The Instructional Technology and Learning Support Advisory Committee evaluates and provides feedback regarding issues related to the academic uses of technology at the college including recommending standards for computer classroom and lab resources. The committee's efforts ensure that academic technology initiatives are prioritized and that the respective needs of the various units have been considered. The committee reviews proposals and recommendations submitted by academic program committees, faculty and student groups. Evaluation of recommendations to establish or modify academic technology standards and policies also fall within its purview. The committee submits its analyses and recommendations to the ED for review and submission to the Technology Council.

Representation: Vice President of Academic Affairs or Dean of Student and Academic Services, Student Services appointment, Faculty Academic Senate appointments (5), Library appointment, Special Projects appointment, ED or appointment, Associated Student Council appointment
Appointment Term: Annual; members may be appointed for multiple terms
Frequency: This Committee meets quarterly or as needed.

Operational Technology Committee
Purpose: The Operational Technology Committee evaluates and provides feedback regarding issues related to the administrative uses of technology at the college. The Committee's ongoing charge is to oversee the overall integrity of institutional data, manage ERP upgrades, and provide guidance, planning and review of ongoing administrative business development. The committee's efforts ensure that administrative

technology initiatives are prioritized and that the respective needs of academic and administrative units have been considered. The committee meets to review upgrade schedules, testing plans, ancillary product implementation recommendations, ERP related project plans, etc. The committee submits its analyses and recommendations to the ED for review and submission to the Technology Council.

Representation: Vice President of Administrative Services or appointment, Director of Fiscal Services, Student Services appointment, Instructional Office appointment, Director of Admissions & Records, Director of Library or appointment, Director of Financial Aid, Director of Human Resources, Director of Institutional Research, Sr. Technical Administrator (OITS) and ED or appointment(s)
Appointment Term: On-going
Frequency: This committee meets monthly or more often as needed.

OITS Objectives and Actions in Support of the Objectives

Actions developed in support of the OITS objectives are incorporated into a five year capital plan that ensures that actions don't remain simply a wish list for technology but rather a dynamic, date driven, work plan. Many actions logically support different OITS objectives. This plan is intended to be reviewed annually to assess progress toward meeting the objectives and to update and adjust actions to best address evolving technologies and institutional goals. All must support at least one objective to ensure that the information technology support at LTCC is driven by the College goals and objectives.

Criticality factors: Critical and Immediate Priority; High and Needed in Near Term; Normal and Desirable in Longer Term; Ongoing and Needing Attention; and Ongoing and Working Satisfactorily

1) **OITS must support teaching and learning through effective software tools, technology enriched classrooms and labs, and cost effective and responsive support services.**
    a. Address immediate needs in technology classrooms to make them more consistent, reliable and user friendly—such as enabling a laptop to be easily connected to projection equipment.
        i. Criticality: Critical and Immediate Priority
        ii. Lead: Sr. Technical Administrator
        iii. Timeframe: July-August 2012
        iv. Governance Review: Instructional Technologies and Learning Support Advisory
    b. Create a 21st century learning environment by utilizing emerging technologies, collaborative tools, and multimedia resources.
        i. Criticality: High and Needed in Near Term
        ii. Lead: Sr. Technical Administrator
        iii. Timeframe: Ongoing-beginning 2012/13
        iv. Governance Review: Instructional Technologies and Learning Support Advisory
    c. Annually solicit feedback from constituents regarding technology services and tools.
        i. Criticality: High and Needed in Near Term

ii. Lead: ED or Designee

iii. Timeframe: November 2012 and then Annually

iv. Governance Review: Technology Council

d. Increase Mac Technical Support on campus.

i. Criticality: High and Needed in Near Term

ii. Lead: Sr. Technical Administrator

iii. Timeframe: 2012/13

iv. Governance Review: Technology Council

2) **OITS must be a market leader for enhancing the student experience in support of the many faceted services provided for students.**

a. Work collaboratively with faculty to ensure an effective, efficient, integrated and flexible learning management system (LMS) environment though use of software tools and services such as Moodle joule2, Wimba, Skype, etc.

i. Criticality: High and Needed in Near Term

ii. Leads: ED and Sr. Technical Administrator

iii. Timeframe: Ongoing beginning in 2012/13

iv. Governance Review: Instructional Technologies and Learning Support Advisory

b. Continue to develop and enhance faculty and staff training programs to support implementation of the Passport portal, emerging technologies (e.g. social media) and campus technology priorities (e.g. cyber security).

i. Criticality: Critical and Immediate Priority

ii. Leads: ED and Sr. Technical Administrator

iii. Timeframe: Ongoing

iv. Governance Review: Technology Council

c. Enhance single sign on use and explore potential integration for secondary systems such as SARS/e-SARS, Voyager, Etudes, and others.

i. Criticality: High and Needed in Near Term

ii. Leads: System ERP Programmer/Web Applications Developer and Sr. Technical Administrator

iii. Timeframe: 2013/14

iv. Governance Review: Operational Technology

d. Showcase technology resources to enhance image across campus.

i. Criticality: Ongoing and Needing Attention

ii. Lead: ED or Designee

iii. Timeframe: Ongoing

iv. Governance Review: Technology Council

e. Enhance print service capabilities for students to include color copying/printing through a pay-per-page modality and address management of student printing across the campus.
    i. Criticality: High and Needed in Near Term
    ii. Lead: Sr. Technical Administrator
    iii. Timeframe: 2013/14
    iv. Governance Review: Technology Council

f. Enhance security by installing security cameras at building exits and with coverage of primary parking areas.
    i. Criticality: High and Needed in Near Term
    ii. Lead: Sr. Technical Administrator
    iii. Timeframe: 2014/15
    iv. Governance Review: Technology Council

g. Create and support a stable, secure wireless infrastructure throughout the campus.
    i. Criticality: Critical and Immediate Priority
    ii. Lead: Sr. Technical Administrator
    iii. Timeframe: 2012/13
    iv. Governance Review: Technology Council

h. Increase bilingual support of online resources that target the initial contact for general information.
    i. Criticality: High and Needed in Near Term
    ii. Lead: System ERP Programmer/Web Applications Developer with liaisons from Admissions & Records and Student Services
    iii. Timeframe: 2013/14
    iv. Governance Review: Internet, Portal & Social Media Advisory

i. Collaborate with academic and student support personnel in the development of new student orientation content to ensure students are informed about campus technology resources.
    i. Criticality: High and Needed in Near Term
    ii. Lead: ED or Designee
    iii. Timeframe: 2012/13
    iv. Governance Review: Technology Council

3) **OITS must enable the computing and technology support infrastructure to provide secure data management, effective business operations and effective computing resources.**

a. Establish criteria and introduce technologies to provide the option of mobile devices as a primary workstation for faculty and staff that have ongoing needs for mobile computing.
    i. Criticality: High and Needed in Near Term

ii. Lead: Sr. Technical Administrator

iii. Timeframe: 2012/13

iv. Governance Review: Instructional Technologies and Learning Support Advisory

b. Implement a life cycle replacement program for virtual desktops and/or PC/Mac desktops and laptops to ensure adequate resources and cost effective operations.

i. Criticality: Critical and Immediate Priority

ii. Lead: Sr. Technical Administrator

iii. Timeframe: 2012/13

iv. Governance Review: Technology Council

c. Implement VOIP service to the campus replacing the Meridian PBX to address unified messaging, call center capability, emergency PA system, call forwarding to cell phones or other numbers, caller ID, auto-attendant, and wireless handsets as well as provide phone access in all classrooms.

i. Criticality: Critical and Immediate Priority

ii. Lead: Sr. Technical Administrator

iii. Timeframe: 2012/13

iv. Governance Review: Technology Council

d. Implement alternative technologies to mitigate performance problems with terminal services.

i. Criticality: Critical and Immediate Priority

ii. Lead: Sr. Technical Administrator

iii. Timeframe: 2012/13

iv. Governance Review: Technology Council

e. Evaluate and address e-mail reliability, functionality, archiving and additional storage for faculty and staff email.

i. Criticality: Critical and Immediate Priority

ii. Lead: Sr. Technical Administrator

iii. Timeframe: 2012/13

iv. Governance Review: Technology Council

f. Continue development of workflows to support efficiencies and process automations.

i. Criticality: Ongoing and Needing Attention

ii. Lead: System ERP Programmer/Web Applications Developer

iii. Timeframe: Ongoing

iv. Governance Review: Operational Technology

g. Increase awareness and potential for automating processes that are currently being done manually.

i. Criticality: Normal and Desirable in Longer Term
ii. Lead: ED or Designee
iii. Timeframe: Ongoing
iv. Governance Review: Operational Technology

h. Analyze the costs and benefits of site licenses for software used College-wide; pursue site licenses where warranted.
i. Criticality: Ongoing and Needing Attention
ii. Lead: ED or Designee
iii. Timeframe: Ongoing
iv. Governance Review: All

4) Effective strategies for communication and collaboration across constituencies must be nurtured for OITS to be able to foster efficiencies and adapt effectively to changing information technology needs.

a. Explore data center consortium opportunities with other California community college districts for possible disaster recovery and/or data center management efficiencies.
i. Criticality: High and Needed in Near Term
ii. Lead: ED
iii. Timeframe: 2012/13
iv. Governance Review: Operational Technology

b. Identify campus software add-on enhancements or application features that promote and enable collaboration and data sharing among faculty, staff and students.
i. Criticality: High and Needed in Near Term
ii. Lead: ED or Designee
iii. Timeframe: 2013/14
iv. Governance Review: Instructional Technologies and Learning Support Advisory

c. Implement an enhanced OITS portal site highlighting services provided.
i. Criticality: Normal and Desirable in Longer Term
ii. Lead: System ERP Programmer/Web Applications Developer
iii. Timeframe: 2012/13
iv. Governance Review: Technology Council

d. Implement a service catalog for constituents to easily identify options available and services provided.
i. Criticality: Normal and Desirable in Longer Term
ii. Lead: Sr. Technical Administrator
iii. Timeframe: 2013/14
iv. Governance Review: Technology Council

e. Engage faculty and staff to review current business processes and identify software or resource options that can be provided in order to more effectively or efficiently meet campus goals.
    i. Criticality: Ongoing and Needing Attention
    ii. Lead: ED
    iii. Timeframe: Ongoing beginning 2012/13
    iv. Governance Review: Operational Technology

f. Promote and further develop the data classification strategy to ease reporting while promoting security and privacy.
    i. Criticality: Ongoing and Needing Attention
    ii. Lead: System ERP Programmer/Web Applications Developer
    iii. Timeframe: Ongoing beginning 2012/13
    iv. Governance Review: Operational Technology

g. Create Quality Assurance review processes, through user group feedback loops for continuous QA improvements.
    i. Criticality: Ongoing and Needing Attention
    ii. Lead: ED
    iii. Timeframe: 2013/14
    iv. Governance Review: Operational Technology

h. Implement Board Docs or similar technology to facilitate documentation dissemination process for the Board of Trustees as well as enhancing the online resources of other groups and committees.
    i. Criticality: High and Needed in Near Term
    ii. Lead: Sr. Technical Administrator
    iii. Timeframe: 2012/13
    iv. Governance Review: Technology Council

i. Implement a "Green technology" program through implementation of power-management, supply and equipment recycling, and supply/resource conservation through the on-going use of digital repositories.
    i. Criticality: Normal and Desirable in Longer Term
    ii. Lead: Sr. Technical Administrator
    iii. Timeframe: 2013/14
    iv. Governance Review: Technology Council

j. Continue building the comprehensive branding and marketing plan for OITS to help foster communicative and collaborative interactions with faculty, staff and students.
    i. Criticality: Critical and Immediate Priority

ii. Lead: ED and PIO

iii. Timeframe: Ongoing beginning 2012/13

iv. Governance Review: Technology Council

k. Participate in professional associations, the Datatel User Group, listervs and CC development initiatives.

i. Criticality: Ongoing and Needing Attention

ii. Lead: ED or Designee

iii. Timeframe: Ongoing beginning 2012/13

iv. Governance Review: Operational Technology

l. Fully implement "CampusEAI" (vendor for content management system) to support the College's web development needs.

i. Criticality: High and Needed in Near Term

ii. Lead: Sr. Technical Administrator and Public Information Officer

iii. Timeframe: 2012/13

iv. Governance Review: Internet, Portal & Social Media Advisory

m. Publish results of technology plan assessment and evaluation efforts.

i. Criticality: Ongoing and Needing Attention

ii. Lead: ED and Institutional Researcher

iii. Timeframe: Annual

iv. Governance Review: Technology Council

n. Regularly evaluate the development of administrative systems at peer institutions nationally and assess their activities relative to College's needs.

i. Criticality: Ongoing and Needing Attention

ii. Lead: System ERP Programmer/Web Applications Developer and Sr. Technical Administrator

iii. Timeframe: Ongoing

iv. Governance Review: Operational Technology

o. Provide regular reports to campus governance bodies and key stakeholders regarding technology projects and progress.

i. Criticality: Critical and Immediate Priority

ii. Lead: ED and other OITS Governance Liaisons

iii. Timeframe: Ongoing

iv. Governance Review: Technology Council

5) **To retain professional staff and maintain effective technology operations, OITS must have systematic training, professional development, and promotion tracks.**

a. Implement the staff development, recruitment and training/cross-training plan.

i. Criticality: High and Needed in Near Term
ii. Lead: ED
iii. Timeframe: Ongoing beginning 2012/13
iv. Governance Review: Technology Council

b. Develop and publicize, a plan for annual professional development opportunities for technology staff, that encourages and enables participants to be qualified for promotion consideration.
   i. Criticality: Normal and Desirable in Longer Term
   ii. Lead: ED
   iii. Timeframe: Ongoing beginning 2013/14
   iv. Governance Review: Technology Council

c. Develop a "Service-Oriented Architecture (SOA)" for OITS based on "Information Technology Infrastructure Library (ITIL)" best practices designed to align IT service strategies with organizational needs. This project, which will include a comprehensive ITIL training program for all OITS full-time staff, will result in a fully service-oriented approach to managing information technology services. (A "Service-Oriented Architecture" is a collection of services within an institution and these services need to coordinate and communicate with each other to ensure services are provided effectively to the end user).
   i. Criticality: Normal and Desirable in Longer Term
   ii. Lead: ED or Sr. Technical Administrator
   iii. Timeframe: Ongoing
   iv. Governance Review: Technology Council

d. Explore and develop policies and incentives to promote technology training and use among faculty, staff, and students and make technology training more readily available.
   i. Criticality: High and Needed in Near Term
   ii. Lead: ED or Designee
   iii. Timeframe: Ongoing beginning 2012/13
   iv. Governance Review: Technology Council

6) **OITS must effectively operate an increasingly complex infrastructure supporting the changing computing and communications needs of the College.**

a. Implement client-centric service teams to support incident management and service hours consistent with hours of operations (both business and instruction).
   i. Criticality: Critical and Immediate Priority
   ii. Lead: ED
   iii. Timeframe: 2012/13
   iv. Governance Review: Technology Council

b. Augment client services through implementation of new knowledge base, incident management and asset tracking software and/or services.
    i. Criticality: High and Needed in Near Term
    ii. Lead: Sr. Technical Administrator
    iii. Timeframe: 2013/14
    iv. Governance Review: Technology Council

c. Through the service team support model, implement OITS service level agreements that define service hours and on-call procedures, define how priorities are identified and provide users with escalation procedures.
    i. Criticality: High and Needed in Near Term
    ii. Lead: Sr. Technical Administrator
    iii. Timeframe: 2012/13
    iv. Governance Review: Technology Council

d. Monitor and manage campus wireless infrastructure in a manner that will facilitate faculty and students to utilize mobile technology to enhance and facilitate academic achievement and experience.
    i. Criticality: Critical and Immediate Priority
    ii. Lead: Sr. Technical Administrator
    iii. Timeframe: Ongoing beginning 2012/13
    iv. Governance Review: Internet, Portal & Social Media Advisory

e. Coordinate, develop and publish structured processes for OITS services including requesting reporting and data requests in order to empower faculty and staff with the tools needed to support instruction and operations (Coordinate with the Office of Institutional Research and Planning).
    i. Criticality: Critical and Immediate Priority
    ii. Lead: ED, Sr. Technical Administrator, or Designee
    iii. Timeframe: 2012/13
    iv. Governance Review: Technology Council

f. Develop and publish structured processes for OITS services including requesting and upgrading campus software, technology purchasing, web and desktop services in order to empower faculty and staff with the tools needed to support instructions and operations.
    i. Criticality: Critical and Immediate Priority
    ii. Lead: ED or Designee
    iii. Timeframe: 2012/13
    iv. Governance Review: Technology Council

g. Convert common sign-on systems to single sign-on to provide faster and more convenient authentication.

i. Criticality: Ongoing and Needing Attention
ii. Lead: System ERP Programmer/Web Applications Developer
iii. Timeframe: 2013/14
iv. Governance Review: Internet, Portal & Social Media Advisory

h. Centralize, analyze, and track contracts, hardware, maintenance agreements, licenses and software renewals to assure faculty and staff do not have an interruption in technology services.
   i. Criticality: Critical and Immediate Priority
   ii. Lead: ED and OITS Administrative Assistant
   iii. Timeframe: 2012/13
   iv. Governance Review: Technology Council

i. Implement a structured ERP upgrade process to ensure that the ERP products are regularly updated.
   i. Criticality: Ongoing and Needing Attention
   ii. Lead: Sr. Integration Analyst
   iii. Timeframe: 2012/13
   iv. Governance Review: Operational Technology

j. Formally integrate usability (ease of use) as a consideration in processes for adoption and/or upgrades of any centrally provided tool, system or space. Utilize methods such as usability testing to gain direct feedback to inform technology acquisition, design, and implementation.
   i. Criticality: High and Needed in Near Term
   ii. Lead: All OIT Project Leads
   iii. Timeframe: Ongoing
   iv. Governance Review: Technology Council

k. Ensure an infrastructure that is current, standards-based, and supportable by multiple vendors. Example
   i. Criticality: Ongoing and Needing Attention
   ii. Lead: Sr. Technical Administrator and OITS Project Leads
   iii. Timeframe: Ongoing
   iv. Governance Review: All

l. Develop, maintain, and regularly test a risk management plan which includes disaster recovery procedures.
   i. Criticality: High and Needed in Near Term
   ii. Lead: Sr. Technical Administrator and OITS Project Leads
   iii. Timeframe: Ongoing

iv. Governance Review: Technology Council

m. Develop and maintain policies and procedures for system security, password management, system operations, and system backups.

i. Criticality: Normal and Desirable in Longer Term

ii. Lead: ED and Sr. Technical Administrator

iii. Timeframe: 2012/13

iv. Governance Review: Operational Technology

n. Build a comprehensive data warehouse (ODS) and the report development capacity to enable an institutional culture of inquiry, assessment and data-informed decision making.

i. Criticality: Critical and Immediate Priority

ii. Lead: TBD

iii. Timeframe: 2012/13

iv. Governance Review: Executive IT Steering

Appendix "A" College Mission, Vision, Beliefs, Goals and Objectives

Mission

Lake Tahoe Community College (LTCC) provides access to higher education for the local community and to those who show an interest in our unique and supportive environment. LTCC focuses on enhancing the intellectual, cultural, and economic vitality of our diverse community by offering opportunities for students to achieve their educational, professional, and personal goals through the provision of:

- Developmental education to achieve basic foundational skills in English, including reading and writing, and mathematics, which are essential for students to succeed in the workforce and higher education.
- Professional and career education to achieve employment, and enhanced career and technical skills for job advancement, in order to stimulate the development of an increasingly diverse local economy, and to advance California's economic growth and global competitiveness.
- Lower division post-secondary education to achieve transfer to a four-year post-secondary educational institution and success in obtaining a degree.
- General education to achieve critical thinking and communication skills, global awareness, personal responsibility, and professional development.

LTCC is committed to fostering innovation and sustainable practices that contribute to institutional effectiveness and student success, verified by a process of assessment, and supported by integrated planning and resource allocation.

Vision

- Lake Tahoe Community College will provide outstanding educational opportunities for every student in a personal learning community.
- Guided by our commitment to learning, we will be known for our innovative instructional programs delivered in a student-oriented environment.
- Academic excellence and strong community partnerships will afford our students the experiences necessary for their future.
- A Personal Learning Community for all Seasons"

Beliefs

We at Lake Tahoe Community College believe:

- Students come first
- An educated citizenry is fundamental
- Learning enhances the quality of life
- Innovation, integrity, high standards and the pursuit of excellence are essential
- Diversity enriches
- We make a difference

Restatement of Goals of the College Strategic Plan 2011-2017

Goal 1 - Early College Awareness, Preparedness and Readiness

1.1 Strengthen the secondary-to-postsecondary educational pipeline

1.2 Focus and sustain outreach and recruitment effort involving underrepresented and underserved groups

Goal 2 - Start Right

2.1 Create a welcoming, inclusive environment, beginning with prospective students' first contact with the college

2.2 Ensure newly entering students have the information, resources and tools to be successful prior to the first day of class

Goal 3 - Clear Expectations and Strong Support

3.1 Establish early, clear expectations for students' performance while providing the support necessary for their success.

3.2 Identify and intervene early with students who are experiencing barriers to learning and success

Goal 4 - Connection and Direction

4.1 Promote the development of supportive student relationships/interactions with peers, faculty and staff

4.2 Ensure all students develop and understand the steps necessary to achieve their educational goal

Goal 5 - Clear and Effective Pathways Toward Completion

5.1 Offer programs and courses at the right times, in the right sequences and through the most effective modalities to facilitate student timely completion of their educational and professional goals

5.2 Facilitate students' early participation in and progress through foundational course sequences culminating in the successful completion of Gateway English and Mathematic courses

Goal 6 - Heightened Community Awareness

6.1 Increase the presence and visibility if the College in the community through higher levels of participation and sponsorship in community events, organizations and projects

6.2 Provide to the community, timely, clear and consistent communications about the role and contributions of the College

Goal 7 - Community Leadership and Partnership

7.1 Develop and maintain strategic relationships throughout the community in order to strengthen local and regional economic and workforce development initiatives

7.2 Facilitate the development of sustainable community partnerships in addressing shared challenges and responsibilities

Goal 8 - Fiscal Stability, Resilience and Vitality

8.1 Ensure efficient and effective use of resources

8.2 Diversify and enhance revenue streams

Goal 9 - Vibrant Learning Spaces

9.1 Establish a robust technology environment and support that reflects proactively the evolving needs of students, faculty and staff

9.2 Maintain healthy, vibrant and resilient physical spaces and systems

Goal 10 - A Dynamic Workforce

10.1 Develop the professional skills, abilities and talents of faculty, staff and administrators on a continual basis

10.2 Improve systems of communication, governance and recognition to enhance individuals' professional commitment, contributions and satisfaction

Appendix "B" Strategic Alignment of Technology Objectives to College Goals and Objectives

technology Objective	College Goal &Objective(s) Supported
1) OITS must support teaching and learning through effective software tools, technology enriched classrooms and labs, and cost effective and responsive support services.	2.2; 4.1; 5.1; 8.1; 9.1; 9.2; 10.1; 10.2
2) OITS must be a market leader for enhancing the student experience in support of the many faceted services provided for students.	1.2; 2.1; 2.2; 4.1; 5.1; 6.1; 6.2; 9.1; 9.2
3) OITS must enable the computing infrastructure to provide secure data management and effective computing resources.	8.1; 9.1
4) Effective strategies for communication, cooperation and collaboration across constituencies must be nurtured for OITS to be able to foster efficiencies and adapt effectively to changing information technology needs.	4.1; 7.1; 7.2; 10.1; 10.2
5) To retain professional staff and maintain effective technology operations, OITS must have systematic training, professional development, and promotion tracks.	8.1; 9.1; 9.2; 10.1; 10.2
6) OITS must effectively operate an increasingly complex infrastructure supporting the changing computing and communications needs of the College.	2.1; 2.2; 8.1; 9.1; 10.1

Appendix "C" Technology Plan Timeline

Implementation Steps

Action Item	Action #	Timeline	2011-12	2012-13	2013-14	2014-15	2016-17	2017-18
Complete technology assessment	n/a	Winter 2012						
Adopt technology plan	n/a	Spring 2012						
Recruit new technical staff	n/a	Summer 2012						
Reclassify existing positions where appropriate	n/a	Summer 2012						
Implement new IT governance structure	n/a	Summer 2012						
Rename Computer Services as Office of Information Technology Services	n/a	Summer 2012						
Update smart classrooms to ensure consistent, reliable, and user friendly teaching spaces	1a	Summer 2012						
Implement technology to facilitate electronic meetings	4h	2012-2013						
Complete and launch redesigned Web site	4l	2012-2013						
Explore data center consortium opportunities	4a	2012-2013						
Centralize technology including staffing, budget, and licensing	n/a	2012-2013						
Increase Mac support on campus	1d	2012-2013						
Upgrade wireless infrastructure	2g	2012-2013						
Implement a technology refresh plan with an ongoing cycle of refreshed computers	3b	2012-2013						
Implement VOIP to replace the telephone system	3c	2012-2013						
Phase out terminal server by implementing alternate technology such as VDI	3d	2012-2013						
Evaluate and improve e-mail reliability, functionality, archiving, and storage	3e	2012-2013						
Implement enhanced OITS portal site	4c	2012-2013						
Further develop data classification strategy	4f	2012-2013						
Implement service teams and expanded service hours	6a	2012-2013						
Support mobile technology through effective management and monitoring of wireless infrastructure	6d	2012-2013						
Centralize documentation of contracts, hardware, and software renewals	6h	2012-2013						
Implement ERP upgrade/update process	6i	2012-2013						
Build a comprehensive data warehouse and report development capacity	6n	2012-2013						
Provide workstation options to support employees with ongoing mobile computing needs	3a	2012-2013						
Implement a "Green Technology" program	4i	2013-2014						
Enhance print services for students	2e	2013-2014						
Implement OITS service catalog	4d	2013-2014						

Enhance single sign-on and explore potential integration of secondary systems	2c	2013-2014						
Implement a "Quality Assurance" continuous improvement cycle	4g	2013-2014						
Implement new knowledge base, incident management, and asset tracking software	6b	2013-2014						
Convert common sign-on systems to single sign-on	6g	2013-2014						
Install security cameras	2f	2014-2015						
Address electrical infrastructure issues including the need for backup generators and access to power sources for charging laptops	n/a	Referred to facility plan						

Technology Management Priorities

Action Item	Action #	Timeline	2011-12	2012-13	2013-14	2014-15	2016-17	2017-18
Upgrade classroom technology and utilize technology to create a 21st century learning environment	1b	Ongoing						
Work collaboratively with faculty to ensure an effective, efficient, integrated and flexible learning management system (LMS) environment	2a	Ongoing beginning in 2012-2013						
Develop and enhance training programs	2b	Ongoing						
Promote technology training and use among employees/ students	5d	Ongoing						
Collaborate on new student orientation content to inform students about campus technology resources	2i	2012-2013						
Brand and market OITS to the campus community	4j	2012-2013						
Define service hours, on-call procedures, prioritization practices, and escalation procedures	6c	2012-2013						
Implement policies and procedures for system security, password management, system operations, and system backups	6m	2012-2013						
Develop and publish structured processes for OITS services	6e, 6f	2012-2013						
Conduct cost/benefit analysis on site licensing and pursue where warranted	3h	2013-2014						
Identify enhancements or features that promote collaboration and data sharing	4b	2013-2014						
Increase bilingual support of online resources that target initial contact	2h	2014-2015						
Solicit feedback on technology services and tools	1c	Ongoing						
Continue development of workflows and automations	3f	Ongoing						
Increase awareness of potential automation of business processes	3g	Ongoing						
Showcase technology resources	2d	Ongoing						
Identify software or resource options that more effectively support campus goals	4e	Ongoing						
Participate in professional associations and user groups	4k	Ongoing						

Regularly assess OITS and evaluate practices against peer institutions	4m, 4n	Ongoing						
Report regularly to governance committees and stakeholders	4o	Ongoing						
Create and implement staff development, recruiting, and training plans for OITS	5a, 5b	Ongoing						
Develop a Service-Oriented Architecture for OITS based on best practices	5c	Ongoing						
Integrate usability into processes of adoption/upgrades	6j	Ongoing						
Ensure infrastructure is current, standards-based, and supportable by multiple vendors	6k	Ongoing						
Develop, maintain, and regularly test risk management plan	6l	Ongoing						

Appendix "D" Capital Equipment Project & Technology Refresh Plan

The Equipment Replacement Plan assumes a 3-year on-going cycle of refreshed computers for all systems on campus. The proposed lease is a 'fair market lease' where the equipment is returned at the end of the 36-month lease. The annual cost increases each year until the third year when the refresh cycle is complete and the on-going costs are equalized year-to-year. PC 'all-in-one' units, iMacs and laptops simplify cabling and support costs thus lowering the total cost of ownership per unit when part of a regular 3 year replacement cycle. As the life cycle of the first lease systems approaches renewal, consideration should be given the state of the technology, costs and support for desktop virtualization.

Fiscal implications below are listed for planning purposes. However, it is anticipated that this section will be adjusted frequently to best address LTCC priorities and needs in a rapidly changing technology environment. Unit costs may be reduced in subsequent years if it is determined that desired performance levels can be supplied by lower-cost models. The standard for laptops will be a model which provides reliable performance at the lowest cost. Exceptions to this standard will be reviewed based on criteria to be developed by the Technology Council and approved based on individual user needs.

In order to effectively manage the institution's technology, OITS will consider emerging technologies, cloud-based solutions, consortium opportunities, virtualization, and other options which may result in changes to Appendix D in order to fully leverage technology funds and build a comprehensive technology environment to support students and employees.

Fiscal Year 2011/12

Item Description	Quantity	Unit Cost	Total
Laptops as Primary Workstation – Pilot	5	$1,219.00	$6,095.00
Laptop Docks for Pilot	5	$150.00	$750.00
Laptops for Mobile Classroom & Board	33	$518.00	$17,094.00
Laptop Mobile Cart for above systems	1	$1,943.19	$1,943.19
Total Commitment (excluding tax, shipping, and recycling fees)			**$25,882.19**

Source of Funds & Financing

Description	Fund/Acct	Current Fiscal Total	MM/YY Complete
Laptop Purchases	OITS	$23,189.00	NA
Laptop Docks	OITS	$750.00	NA
Laptop Mobile Cart Purchase	OITS	$1,943.19	NA
Total Budget Required for Fiscal Year 2011/12*		**$25,882.19**	

Fiscal Year 2012/13

Item Description	Quantity	Unit Cost	Total
Items on HP Lease, 2012/13			
1) PC Refresh	125	$999.00	$124,875.00
iMac Refresh	20	$1,199.00	$23,980.00
VOIP Phones	120	$240.00	$28,800.00
Classroom Technology Upgrades and Collaborative Classroom Pilot	N/A	N/A	$60,000.00
Wireless Upgrades & Cloud Controller	1	$4,800.00	$4,800.00
Virtual Server Cluster	1	$50,000.00	$50,000.00
Virtualization/Replacement of Terminal Server	TBD	TBD	TBD
Total Commitment (excluding tax, shipping, and recycling fees)			**$292,455.00**

Source of Funds & Financing

Description	Fund/Acct	Current Fiscal Total	MM/YY Complete
HP Lease, 2012/13 (12 Months)	OITS	$41,625.00	6/15
Wireless Upgrade Purchases	OITS	$4,800.00	NA
iMac Refresh	OITS	$23,980.00	NA
VOIP Phone Purchase	Pending Budget Review	$28,800.00	NA
Classroom Tech Purchases	Pending Budget Review	$60,000.00	NA
Virtual Server Cluster	Pending Budget Review	$50,000.00	NA
Virtualization/Replacement of Terminal Server	Pending Budget Review	TBD	TBD
Total Budget Required for Fiscal Year 2012/13*		**$209,205.00**	

Fiscal Year 2013/14

Item Description	Quantity	Unit Cost	Total
Items on HP Lease, 2013/14			
1) PC General Refresh	150	$999.00	$149,850.00
Laptop Purchases (Primary Workstation)	25	$1,219.00	$30,475.00
Laptop Docks (or similar device)	25	$150.00	$3,750.00
iMac Refresh	14	$1,199.00	$16,786.00
Network SAN, Switches, Software & Access Points	1	$14,800.00	$14,800.00
Classroom Technology	10	$12,000.00	$120,000.00
Total Commitment (excluding tax, shipping, and recycling fees)			**$335,661.00**

Source of Funds & Financing

Description	Fund/Acct	Fiscal Year Total	MM/YY Complete
HP Lease, 2012/13 (12 Months)	Pending Budget Review	$41,625.00	6/15
HP Lease, 2013/14 (12 Months)	Pending Budget Review	$49,950.00	6/16
Laptop Purchases (Primary Workstation)	Pending Budget Review	$30,475.00	NA
Laptop Docks (or similar device)	Pending Budget Review	$3,750	NA
iMac Purchase	Pending Budget Review	$16,786.00	NA
Network Equipment Purchase	Pending Budget Review	$14,800.00	NA
Classroom Tech Purchases	Pending Budget Review	$120,000.00	NA
Total Budget Required for Fiscal Year 2013/14*		**$277,386.00**	

Fiscal Year 2014/15

Item Description	Quantity	Unit Cost	Total
Items on HP Lease, 2014/15			
1) PC General Refresh	150	$999.00	$149,850.00
Network SAN, Switches, Software & Access Points	1	$16,200.00	$16,200.00
10 Camera Outdoor Surveillance System	1	$24,000.00	$24,000.00
Classroom Technology	10	$12,000.00	$120,000.00
TBD 48 Month Lease, Color Copier/Printer	16	$5,400.00	$86,400.00
Total Commitment (excluding tax, shipping, and recycling fees)			**$396,450.00**

Source of Funds & Financing

Description	Fund/Acct	Fiscal Year Total	MM/YY Complete
HP Lease, 2012/13 (12 Months)	Pending Budget Review	$41,625.00	6/15
HP Lease, 2013/14 (12 Months)	Pending Budget Review	$49,950.00	6/16
TBD Lease, 2014/15 (12 Months)	Pending Budget Review	$49,950.00	6/17
TBD Copier Lease, 2014/15 (12 Months)	Pending Budget Review	$21,600.00	6/19
Network Equipment Purchase	Pending Budget Review	$16,200.00	NA
Camera Surveillance Purchase	Pending Budget Review	$24,000.00	NA
Classroom Tech Purchases	Pending Budget Review	$120,000.00	NA
Total Budget Required for Fiscal Year 2014/15*		**$323,325.00**	

Fiscal Year 2015/16

Item Description	Quantity	Unit Cost	Total
Items on HP Lease, 2015/16			
1) PC Refresh (125) + New Computers (25 - growth)	150	$999.00	$149,850.00
Laptops for Mobile Classroom & Board (Refresh)	33	$518.00	$17,094.00
Laptop Mobile Cart for above systems (Refresh)	1	$1,950.00	$1,950.00
iMac Refresh	20	$1,199.00	$23,980.00
Network SAN, Switches, Software & Access Points	1	$16,200.00	$16,200.00
Classroom Technology	10	$12,000.00	$120,000.00
Total Commitment (excluding tax, shipping, and recycling fees)			**$329,074.00**

Source of Funds & Financing

Description	Fund/Acct	Fiscal Year Total	MM/YY Complete
HP Lease, 2013/14 (12 Months)	Pending Budget Review	$49,950.00	6/16
HP Lease, 2014/15 (12 Months)	Pending Budget Review	$49,950.00	6/17
HP Lease, 2015/16 (12 Months)	Pending Budget Review	$49,950.00	6/18
TBD Copier Lease, 2014/15 (12 Months)	Pending Budget Review	$21,600.00	6/19
Laptop Purchase	Pending Budget Review	$17,094.00	NA
Laptop Cart Purchase	Pending Budget Review	$1,950.00	NA
iMac Purchase	Pending Budget Review	$23,980.00	NA
Network Equipment Purchase	Pending Budget Review	$16,200.00	NA
Classroom Tech Purchases	Pending Budget Review	$120,000.00	NA
Total Budget Required for Fiscal Year 2015/16*		**$350,674.00**	

Fiscal Year 2016/17

Item Description	Quantity	Unit Cost	Total
Items on HP Lease, 2016/17			
1) PC Refresh	150	$999.00	$149,850.00
iMac Refresh	14	$1,199.00	$16,786.00
Network SAN, Switches, Software & Access Points	1	$16,200.00	$16,200.00
Classroom Technology	10	$12,000.00	$120,000.00
TBD Lease, Color Copier/Printer	16	$5,400.00	$86,400.00
Total Commitment (excluding tax, shipping, and recycling fees)			**$389,236.00**

Source of Funds & Financing

Description	Fund/Acct	Fiscal Year Total	MM/YY Complete
HP Lease, 2014/15 (12 Months)	Pending Budget Review	$49,950.00	6/17
HP Lease, 2015/16 (12 Months)	Pending Budget Review	$49,950.00	6/18
HP Lease, 2016/17 (12 Months)	Pending Budget Review	$49,950.00	6/19
TBD Copier Lease, 2014/15 (12 Months)	Pending Budget Review	$21,600.00	6/19
iMac Purchase	Pending Budget Review	$16,786.00	NA
Network Equipment Purchase	Pending Budget Review	$16,200.00	NA
Classroom Tech Purchases	Pending Budget Review	$120,000.00	NA
Total Budget Required for Fiscal Year 2016/17*		**$340,636.00**	

Fiscal Year Summary 2011/12 to 2016/17

Fiscal Year	Total Commitments	Total Budget Required
2011/12	$25,882.19	$25,882.19
2012/13	$292,455.00	$209,205.00
2013/14	$335,661.00	$277,386.00
2014/15	$396,450.00	$323,325.00
2015/16	$329,074.00	$350,674.00
2016/17	$389,236.00	$340,636.00
Total	**$1,768,758.19**	**$1,527,108.19**

*The amounts listed above as total budget required refer only to capital equipment and technology refresh cycles. Planned expenses for staffing, software licensing, maintenance agreements, contracted services, and other technology items are identified in the annual OITS budget.

Appendix "E" Collaborative Learning Center Classroom Models

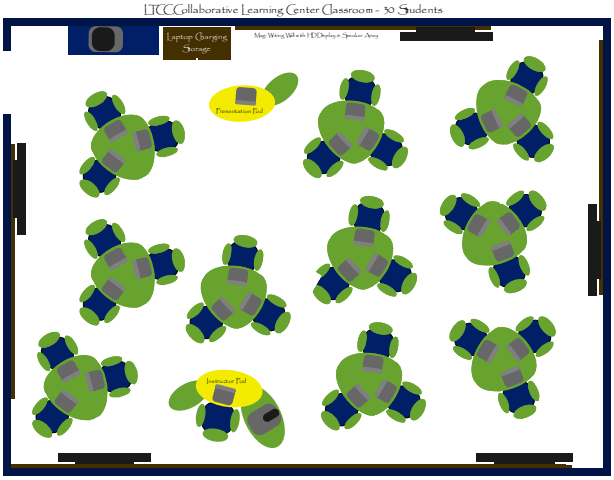
Lake Tahoe Community College
Collaborative Learning Center Classrooms

Concept
To create flexible adult learning centers that are technology enabled, easily reconfigurable & simple to operate and support

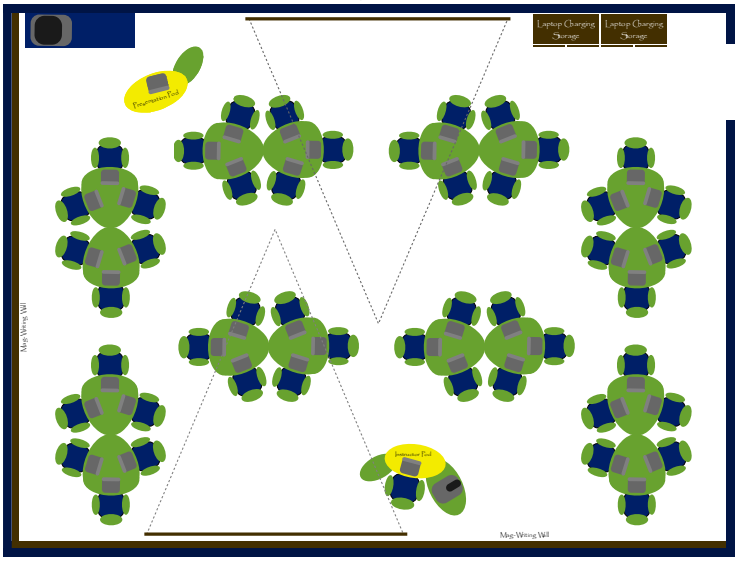
Elements of the Design
- Collaboration pods for 2-3 students
- Student presentation pod
- Instructor pod integrated with multi-media display & document/ image camera
- Easy walk-around flow for instructor interaction
- Five 60" HD Displays in classrooms for 30 or fewer students mounted at collaborative sight lines
- Dual ceiling Mount projectors for 31-48 students
- Large multi-area mag writing walls
- All wireless access--no cabling to individual pods & integrated with multi-media displays
- LTCC laptops/tablets/ipads configured with optional instructor controlled software for monitoring & sharing

Other Resources
- Tegrity 'cloud' lecture capture for tutorial use, class make-up/review and on-line course enhancement
- Moodle joule 2 for 90+% of LTCC course syllabi, course materials, document repository, and 100% of fully on-line courses
- Media check-out resources--digital cameras, video recording and editing, DVD duplication, etc.

LTCC Collaborative Learning Center Classroom - 30 Students



LTCC Collaborative Learning Center Classroom - 48 Students



Student Observations @LTCC
- Fixed chair/desk furniture is awkward when using a laptop and is 'embarrassingly' uncomfortable for many students.
- It is highly desirable to have an LMS with greater functionality and to have faculty use the LMS for syllabi and course materials

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How high tech should the 21st century classroom be?

Magnetized white boards may seem low-tech compared to products such as Promethean's interactive white boards and learner response systems, however these systems add a level of complexity which only makes faculty buy-in and IT support more challenging. The interactive white board solutions also vastly limit the view-ability within the standard to large size class room. By using a mix up high and low tech solutions, such as large writing/posting walls, multiple projection images and the resources of learning management systems such as Moodle joule 2, the classroom of the 21st century fosters collaboration in a modality that is user friendly for the instructor, the students and the support staff while utilizing basic mobile wireless computing devices and cloud services.