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KAPIʻOLANI
COMMUNITY COLLEGE

Technology Plan
2013-2017

KAPI'OLANI COMMUNITY COLLEGE TECHNOLOGY PLAN
FY 2013-2018
Updated August 2014

I. Introduction and Background

The Kapi'olani Community College (KCC) Technology Plan sets goals to meet and exceed the technology needs of the campus in furthering the mission, vision and strategic directions of the College's 2008-2015 Strategic Plan (link[1]), in alignment with upcoming trends in information technology. Students will be engaged with robust and cutting-edge technology-enhanced learning environments that prepare them for high wage careers in science, technology, engineering, digital media, and other knowledge-intensive industries. Faculty and staff also need technology to support instruction in these learning environments and to improve ongoing communication with the community and community partners. All of this must be done in a high-speed, information-secure environment.

The plan provides a roadmap for addressing project prioritization and key issues facing technology deployment and use at the College. This five-year plan is to be reviewed and updated annually and is modified based upon the changing needs of students and institutional priorities. The plan is coordinated with the goals of the strategic plans of the College and the University of Hawaii Community College System. The Technology Plan functions as a guide to the allocation of resources in support of student learning and institutional effectiveness at the College.

Technology plays a critical role in supporting the work of every member of the campus community. Planning for technology occurs at various levels: (1) System level (UHCC and University) guided by the University's Chief Information Officer (CIO) and UH Information Technology Services (ITS); (2) Institutional level as part of strategic planning; and (3) Program and unit level as part of the Annual Reports of Program Data, Comprehensive Program Reviews, and 5-Year Budget Plans. Budgeting and allocation of resources are informed and impacted by planning at all three levels.

The College's Center for Excellence in Learning, Teaching, and Technology (CELTT) is responsible for informing and implementing the College's technology vision and managing technology operations. The focus of this Technology Plan are the **current and new initiatives** to support the College's move toward centralization of IT management and to resolve IT issues that have been identified by CELTT and the campus as priorities for the current five-year timeframe. *CELTT Technology Services at the College* (link[2]) lists the ongoing work and core services CELTT and other departments and units are tasked with.

The processes for decision-making are supported by a Vision, Ethos, Mission, and Goals that guide the College's implementation of technology for its students and employees.

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[1] Kapi'olani Community College, "KCC Strategic Plan 2008-2015", Archive Link: http://hdl.handle.net/10790/173

[2] Kapi'olani Community College, "CELTT Tech Services at the College", Archive Link: http://hdl.handle.net/10790/2244

A. Vision

The College uses technology to support teaching and learning, enhance student access to educational opportunities, personalize student services, and provide effective administrative processes to meet the changing needs of the College and its community environment. 21st century technology is at the forefront in providing an environment that is proactive at responding to the needs/demands of the campus community.

B. Ethos

Those who use technology and those responsible for technology, in the service of the College's mission and vision, are guided by a professional code that determines our principles, core values, and highest aspirations. This ethos guides all of us on a course that exercises stewardship and professionalism. We are all entrusted to support the College and advance its interests.

- Service. We put students first, College before unit, and mission before self.
- Integrity. We uphold standards of professional conduct.
- Excellence. We bring excellence by being self-aware, being reflective of performance, and defining expectations.
- Teamwork. We stand by, and behind, each other.
- Stewardship. We ensure that what we do is in the best interest of the College, and the best use of resources, while preserving the highest standards for learning.

C. Mission

KCC's mission statement defines the institution's broad educational purposes, its intended student population, and its commitment to achieving student learning. The College is committed to use its technology resources to support student learning programs and services and to improve institutional effectiveness by empowering students to learn, faculty to teach, and staff and administrators to be productive in a positive, technologically-supportive, learning environment.

D. Goals

- The College enhances the operation and effectiveness of the institution through technological services, professional support, facilities, hardware and software updates and upgrades.

- The College provides quality training to students and personnel in the effective application of its information technology.

- The College systematically plans, acquires, maintains, and upgrades or replaces technology infrastructure and equipment to meet institutional needs.

- The College distributes and utilizes technology resources to support the development, maintenance, and enhancement of its programs and services.

II. Technology planning and implementation at Kapiʻolani Community College

In keeping with shared and participatory governance, this Technology Plan is the result of a campuswide discussion process regarding the direction for and the use of information and audio-visual technology at the College. In early 2014, the Chancellor asked the Chancellor's Advisory Council (CAC) to provide cross-campus recommendations regarding the updating of the Technology Plan. The CAC designated the CAC Technology Working Group as a standing committee that assists in identifying technology needs across the campus and makes recommendations to the CAC. The Technology Working Group is composed of students, staff, faculty, and administrators, who worked with the Center for Excellence in Learning, Teaching, and Technology (CELTT) to update the plan.

A. Centralized Technology Management

On February 5, 2013, the Chancellor's Policy, Planning, and Assessment Council (PPAC, an earlier version of the CAC) approved a recommendation to move the campus to centralized technology procurement (link[3]). On April 30, 2013, CELTT reported to PPAC that it would draft the technology plan (link[4]). On April 23, 2014, the CAC Technology Working Group affirmed its commitment to continue moving the campus to comprehensive centralized technology management (link[5]). This transition is, therefore, an integral part of this plan.

Centralized technology management means there is a locus from which computers, classroom technologies, network infrastructures, servers, and telecommunications are managed. To date, the College depends on CELTT to:
- provide consultation services in the areas of computer and AV purchases, and help departments acquire quotes.
- perform the initial install and setup of new computers and mobile devices for departments.
- provide technical support for computers, AV, phone, network, and 2-way radios, by answering questions and troubleshooting problems.

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[3] Policy, Planning, and Assessment Council, "PPAC Mtg 2013-02-05", Archive Link: http://hdl.handle.net/10790/2215

[4] Policy, Planning, and Assessment Council, "PPAC Mtg 2013-04-30", Archive Link: http://hdl.handle.net/10790/2216

[5] Chancellor's Advisory Council Technology Workgroup, "CAC Tech WG Mtg 2014-04-23", Archive Link: http://hdl.handle.net/10790/2242

Growing centralized management involves formalizing communication and advisory channels between CELTT and the rest of the college. CELTT will

- increase its presence in the planning for technology to ensure new components are compatible with current infrastructure, support, and instructional needs,
- approve the purchase of technology to ensure good stewardship of valuable resources and to limit waste,
- track all campus technology to ensure assets are secure and being used appropriately, and to plan for future upgrades or replacements,
- track software installations to ensure licensing compliance,
- ensure ADA compliance is considered and planned for,
- plan future purchases taking into account replacement cycles and changing trends to continue providing a 21st century learning environment.

Centralized technology management does not preclude individual units from creating plans or having area support personnel as long as plans and service fall within the overall College Technology Plan and its standards. CELTT works with units that have technology plans to ensure all technology plans on campus are coordinated with the College's Plan and the UHCC Plan. CELTT assists units to create technology plans if they need them. CELTT also coordinates with technology personnel within units, and this collaboration supports the technology-related work in respective units and supports the goals of the College's Technology Plan. CELTT provides training for unit personnel to ensure the safety of information; also, CELTT provides these personnel with professional development to ensure collegewide standards are upheld.

B. Planning and Budgeting

Determining priorities
CELTT has established a list of criteria for determining priority**.** The priority list below and the ethos statement above provide a guide that informs decisions made by CELTT and the College community, so that criteria for its decisions and suggestions are transparent and reflect the best interests of the College and its Strategic Plan. The list summarizes the priorities of a centralized management system.

1. Health and safety
2. Campus-wide infrastructure and information security
3. Core services and support
4. Impact on a broad student population across multiple disciplines
5. Workforce development tied to technology and a specific degree or certificate
6. Impact on a specific program or department
7. Impact on a specific course

The Cycle of Review for Institutional Planning and Budgeting
CELTT reviews all institutional planning documents and consults with units to ensure that all planned technology is appropriate and ongoing support can be provided. Attention is paid to the unique mission of each unit and its specific needs. The plans are reviewed by the CAC Technology Working Group and reported to the CAC. A cycle of review is outlined below.

Table 1. Technology Planning with Institutional Process

Date	Budget Cycle	CELTT Task
Dec/Jan	Assessment	Review all department and program ARPDs (Annual Review of Program Data), CPRs (Comprehensive Program Review), 5-year budget plans, and the College Strategic Plan for technology needs
Feb/Mar	Prioritization	Review submitted *Allocation Request and New Proposal Forms* and provide recommendations on technology requests
Mar/Apr	Plan Resource Allocation	Draft Technology Action Plan Items for recommendation to the CAC
May/Jun	Administration Review	Submit final recommendations on Technology Action Plan Items to the CAC
Jul/Aug/Sep	Implementation	Execute or assist in technology implementation

Technology planning in grants and other external funding Sources

Some funding sources and grants do not follow Hawaiʻi State funding cycles and fall out of the planning cycles discussed above. CELTT participates in technology planning in grants and other external funding sources. CELTT's role is to determine the impact such funding will have on infrastructure, existing technology plans, and the feasibility of ongoing support. CELTT provides recommendations and, as needed, an outline of the support it can provide.

It is important that all parties seeking such funding take into account ongoing sustainability once the source of funding expires and not assume that the College will automatically take responsibility for continued technology funding. A demonstration of value must be submitted, and continued funding agreed upon by the College and CELTT.

Technology implementation and future trends

CELTT is responsible for technology implementation and for exploring with the campus future trends to meet the needs of the College and the community it serves. Technology planning that occurs at the program and unit levels are guided by technology trends in academic disciplines and specific industries and professions. At a campus-wide level, national trends in educational technology and in the technology industry in general also shape campus technology planning. Formerly distinct technologies are merging and the campus is proactive in anticipating these convergences. Some examples are the merging of telephone and Internet technologies (voice-over-IP or VOIP) and the amalgamation of audio-visual technology and computers.

III. Technology Action Plan

Technology is highly complex, broad, and fast-moving. The College and CELTT are committed to leading the campus forward with researching and implementing the best solutions for current infrastructure and the learning, teaching, and work needs of our students, faculty, and staff. The College must also devote considerable resources to infrastructure maintenance and upgrades.

The following sections address broad categories of technology on campus. Each category includes a brief discussion of the current status of the projects the College is working on and action plans for those projects. Actions plans lay out planned steps, the unit or personnel responsible for carrying out those steps, planned (or historical) start dates, and the current status of each step. Some of these projects were started in earlier years and are still active.

All action plans take into account the spirit of this document in moving the College forward under guidance of the Vision, Ethos, Mission, and Goals.

A. Computer and Audio/Visual Management

A.1. Windows XP Upgrade.

A.1.a. Current Status
Microsoft support for Windows XP ended on April 08, 2014. CELTT planned for computer replacements during fall 2012. CELTT completed a campus-wide technology inventory and developed a purchase plan in October 2013. The purchase plan included **three** tiers reflecting replacement priorities. **Tiers 1 and 2 were initiated first**, and then **Tier 3 was initiated at a later date** and managed as a separate project. The tiers are:

> Tier 1. Computers used to access sensitive information.
> Tier 2. Computers likely to be used to access sensitive information.
> Tier 3. Computers in computer labs

> The College moved to purchase computers for Tiers 1 and 2 in March 2014. The CELTT Information Security Officer removed computers running Windows XP from the College network on April 08, 2014. The CELTT Customer Care Center rebuilt older machines to be used on a temporary basis to fill the gap between the April 8, 2014 deadline and the deployment of new computers. The new computers were deployed in summer 2014.

> Tier 3 computers are those located in labs. The CELTT Customer Care Center rebuilt older machines to be used on a temporary basis to fill the gap between the April 8, 2014 deadline and the deployment of new computers. Labs where computers were in critical need of replacement were identified.

A.1.b. Action Plan for Tiers 1 and 2
This plan supports Priority 2, *Campus-wide infrastructure and network security*. The goal is to reduce the threat of an information security breach.

Action Step	Who	Start Date	Status
Identify computers for replacement	CELTT	Oct 2013	Completed
Initiate purchase	CELTT	Nov 2013	Completed
Initiate purchase	CELTT	Mar 2014	Completed
Computers delivered	Vendor	May 2014	Completed
Deploy computers	CELTT	June 2014	Completed

A.1.c. Action Plan for Tier 3:
This plan supports Priority 4, *Impact on a broad student population across multiple disciplines*. The goal is to bring outdated computer labs into compliance.

Action Step	Who	Start Date	Status
Identify computers for replacement	CELTT	Oct 2013	Completed
Identify computers to rebuild	CELTT	Mar 2014	Completed
Rebuild computers	CELTT	Mar 2014	Completed
Deploy rebuilt computers	CELTT	Apr 2014	Completed
Initiate purchase	CELTT	Jul 2014	Completed
Computers delivered	Vendor	Aug 2014	Completed
Deploy computers	CELTT	Sep 2014	Ongoing

A.2. Audio-visual inventory, purchase, and upgrade.

A.2.a. Current Status
Currently upgrades are managed by departments through their own funds or grants. The management of AV is transitioning to a centralized model. CELTT has been developing an inventory of AV equipment for the College and intends to complete the inventory by December 2014. Once the inventory is complete, CELTT will review it, research the best current technologies for AV support, and develop a plan for purchases or upgrades.

A.2.b. Action Plan for AV inventory, purchase, and upgrade
This plan supports Priority 4. *Impact on a broad student population across multiple disciplines*. The goal is to bring classrooms up to a standard, develop a cycle of replacement, and simplify support.

Action Step	Who	Start Date	Status
AV inventory	CELTT	Oct 2014	
Develop a standard	CELTT	Dec 2014	
Develop a plan for purchases or upgrades, and a cycle of replacement	CELTT	Mar 2015	

A.3. System Replacement for desktops and Peripherals

A.3.a. Current Status
In general, systems are to be replaced approximately every 5 years depending on available funds. With the funding of Tiers 1 and 2 of the XP upgrade, a cycle of replacement has begun. The scheduling of replacements is based upon an annual audit, a review of department annual budgets, and discussion with departments. Systems purchased are based upon a standard. There are exceptions to the standard equipment based on the type of work being done.

A.3.b. Action Plan for System Replacement for desktops and peripherals:
This plan supports Priority 6, *Impact on a specific program or department*. The goal is to provide operational systems that allow individuals to do their work.

Action Step	Who	Start Date	Status
Review department's budget request	CELTT	Jan 2015	
Consult with departments	CELTT	Feb 2015	
Review standard		Apr 2015	
Conduct an annual audit	CELTT	Apr 2014	
Develop a plan for purchases or upgrades	CELTT	May 2015	

A.4. Computer Asset Management

A.4.a. Current Status
Current computer asset management is done manually. Ensuring computer operating systems, security patches and software updates are installed is time consuming and tedious. Users often contact CELTT when something goes wrong. Software licensing compliance goes unchecked.

KACE is a state of the art network-based asset management system that checks computer operating systems and anti-virus software for the latest patches and has the capability of pushing updates to the desktop. A request to purchase KACE was made by CELTT through the Annual Allocation Request and New Proposal budgeting process. It was recommended by the CAC and approved by the Chancellor to be implemented in the fall of 2014.

A.4.b. Action Plan
This plan supports Priority 2, *Campus-wide infrastructure and network security*. The goal is to reduce the threat of an information security breach and ensure software license compliance.

Action Step	Who	Start Date	Status
Research on inventory system	CELTT	Jan 2014	Completed
Purchase	CELTT	Sept 2014	Ongoing
Set up server	CELTT	Oct 2014	
Test	CELTT	Nov 2014	

Deploy	CELTT	Jan 2015	
Develop baseline and goals for operating systems	CELTT	Apr 2015	
Develop baseline and goals for software licensing compliance	CELTT	May 2015	
Develop baseline and goals for information security patches	CELTT	Jun 2015	

A.5. Barcode System to Complement Inventory Management

A.5.a. Current Status
Currently CELTT has a difficult time tracking computer assets. The process is manual through an annual asset audit. The reading of serial numbers is prone to errors and is time consuming.

The barcode system is to complement the KACE system. KACE cannot identify a specific building or room number for a device. A barcode system will complement the KACE system and allow CELTT to exercise good stewardship through the quick reading of barcodes.

A.5.b. Action Plan
This plan supports Priority 3, *Core services and support*. The goal is to track assets to know where all the systems and assets are located. This helps ensure a quick response time for support.

Action Step	Who	Start Date	Status
Identify system	CELTT	May 2014	Completed
Purchase	CELTT	Jun 2014	Completed
Test	CELTT	Jun 2014	Completed
Deploy	CELTT	Jul 2014	Ongoing

A.6. Barcode System to Complement Inventory Management

A.6.a. Current Status
eWaste management is an ongoing process. A regular cycle of disposal is conducted.

A.6.b. Action Plan
This plan supports Priority 3, *Core services and support*. The goal is to account for and track the proper disposal of eWaste on a quarterly or semi-annual basis. This ensures good stewardship.

Action Step	Who	Expected Timeframe
Identify eWaste	CELTT; Departments	Jan, Apr, Jul, Oct, yearly
Preparation	CELTT; Departments	Ongoing
Removal	CELTT	Ongoing

B. Mobile Devices

B.1.a. Current Status
The College continues to develop a new ecology of learning that connects classrooms, labs and centers, campus, community, and cyberspace. This learning ecology opens many avenues to faculty innovation in meeting the diverse learning styles of our students. Mobile devices are a natural part of this learning ecology, enabling more collaborative and innovative learning experiences. The College has taken a managed-adoption approach with an eye towards sustainability and use based on curricular and operational needs. Challenges currently inhibit rapid enterprise-level adoption and deployment of these devices, including:

- Instability in the marketplace with many vendors selling many different devices that have varying costs, configuration options, purchasing methods, support requirements, etc.

- Purchasing constraints – the business model of apps sold only through online storefronts whose currency does not include purchase orders presents problems for traditional institutional procurement practices. Ownership of apps is also problematic.

- Security of highly portable and small devices that may contain confidential and/or sensitive information. Many users of mobile devices store personal information on those devices and often do not practice encryption, password-protection, and other standard security measures, that we employ on desktop and institutional devices.

- Service and support issues – these devices are not currently supported by UH ITS and the various campuses. Support costs are thus not part of current resource allocations.

Examples of pilot projects include the following:

- The Creativity Academies Project provided iPads to student developers of art and science lesson plans in the iBooks format which supports 3D models, video and learning assessment tools.

- The King William Charles Lunalilo Scholars Project provided iPads, apps, and regular training through CELTT on how to use the technology to support time management, personal organization, and study skills. The 2013-2014 cohort was provided Android tablets and similar training.

- The Culinary Arts Program purchased iPads for instructors to utilize in the assessment of their students and students will be encouraged to utilize their iPads to create electronic portfolios.

- The C3T grant for Health Education purchased Dell tablets for student learning outcome assessment in real time, giving students immediate feedback on their progress towards meeting course competencies.

B.1.b. Action Plan

This plan supports Priority 4, *Impact on a broad student population across multiple disciplines.*
The goal is to provide a viable solution for mobile devices that is flexible and sustainable.

Action Step	Who	Start Date	Status
Research trends	CELTT	Aug 2014	Ongoing
Research and define purchasing strategy	CELTT; Business Office	Nov 2014	
Research and define software purchases	CELTT	Jan 2015	
Research and define security parameters	CELTT	Mar 2015	
Research and define support parameters	CELTT	Apr 2015	

C. Infrastructure

C.1. Wireless Network Upgrade Phase 1

C.1.a. Current Status

CELTT upgraded all College wireless access points from 11 and 54Mb to 150Mb; therefore, this item is completed.

C.1.b. Action Plan

This plan supports Priority 2, *Campus-wide infrastructure and network security*. The goal is to improve wireless connectivity by increasing bandwidth and reliability.

Action Step	Who	Start Date	Status
Identify access points to remove	CELTT	Oct 2013	Completed
Identify locations for new access points	CELTT	Nov 2013	Completed
Schedule buildings for upgrade	CELTT	Dec 2013	Completed
Upgrade network closets	CELTT	Feb 2014	Completed
Install and test new devices	CELTT	Mar 2014	Completed

C.2. Wireless Network Upgrade Phase 2

C.2.a. Current Status

CELTT upgraded all College wireless access points from 11 and 54Mb to 150Mb in March 2014. CELTT is planning the next upgrade of wireless access for the College. The next wireless scheme being studied is the 802.11ac protocol. Realistic typical speeds will around 350Mb. Each wireless access point may provide increased coverage, possibly reducing the number of replacements. This will be done in phases.

C.2.b. Action Plan
This plan supports Priority 2. *Campus-wide infrastructure and network security.* The goal is to improve wireless connectivity by increasing bandwidth and reliability.

Action Step	Who	Start Date	Status
Purchase access points for one building for testing	CELTT	Apr 2015	
Identify locations for new access points	CELTT	Mar 2016	
Purchase access points for phase 1	CELTT	May 2016	
Install and test	CELTT	Jul 2016	
Purchase access points for phase 2	CELTT	Apr 2017	
Install and test	CELTT	Jul 2017	
Purchase access points for phase 3	CELTT	Apr 2018	
Install and test	CELTT	Jul 2018	

C.3. Network Upgrade

C.3.a. Current Status
CELTT is expanding the network bandwidth for the College. Current point-to-point, building-to-building, is at 1Gb. The expansion will allow for 10Gb between buildings. This will be done in four phases over the next four years.

C.3.b. Action Plan
This plan supports Priority 2, *Campus-wide infrastructure and network security*. The goal is to improve data throughput by increasing bandwidth and reliability.

Action Step	Who	Start Date	Status
Determine phases of deployment	CELTT	Nov 2014	
Purchase equipment for phase 1	CELTT	Apr 2015	
Install and test	CELTT	Jun 2015	
Purchase equipment for phase 2	CELTT	Apr 2016	
Install and test	CELTT	Jun 2016	
Purchase equipment for phase 3	CELTT	Apr 2017	
Install and test	CELTT	Jun 2017	
Purchase equipment for phase 4	CELTT	Apr 2018	
Install and test	CELTT	Jun 2018	

C.4. Networked Photocopiers

C.4.a. Current Status
Multi-function photocopy machines are being leased to replace older machines no longer under contract. The older machines were "dumb" machines requiring walk-up service only. These new

machines will be networked for desktop printing and will also allow scanning to email. Twenty-two machines have been leased and placed in strategic locations across the campus.

C.4.b. Action Plan
This plan supports Priority 3, *Core services and support*. The goal is to expand photocopying services.

Action Step	Who	Start Date	Status
Define locations	Auxiliary Services	Oct 2013	Completed
Define contract	Auxiliary Services	Dec 2013	Completed
Purchase contract	Auxiliary Services	Feb 2014	Completed
Conduct network survey	CELTT	Mar 2014	Completed
Setup network printing server	CELTT	Jun 2014	Completed
Install machines	CELTT	Jul 2014	Completed
Contract data connection	CELTT	Jul 2014	Ongoing
Test printing	Aux Services	Jul 2014	Completed
Initiate faxing	CELTT; Aux Services	Aug 2014	Ongoing
Initiate scan to Email	CELTT; Aux Services	Nov 2014	
Install printer drivers for desktop printing	CELTT	Nov 2014	

D. Communication and Telecommunication

D.1. College Public Website Upgrade

D.1.a. Current Status
The College's public website was completely redesigned and launched in March 2014. Administrators, departments, and programs have been consulted for updated information and navigation schemes. The new website is less cluttered, provides continuously updated information, and is designed for mobile devices.

D.1.b. Action Plan
This plan supports Priority 4, *Impact on a broad student population across multiple disciplines*. The goal is to bring the website into the 21st century and to give a modern face to the College.

Action Step	Who	Start Date	Status
Create template	CELTT	Feb 2014	Completed
Deploy new website	CELTT	Mar 2014	Completed
Receive feedback and update	CELTT	May 2014	Ongoing

D.2. Social Media

D.2.a. Current Status
In May 2011, the UHCC System Office enacted UHCCP #2.211 Social Media Site and/or

Account Use and Management (http://uhcc.hawaii.edu/OVPCC/policies/docs/2.211.pdf). This policy is intended to ensure that any and all social media interactions on behalf of the University of Hawaiʻi Community Colleges (UHCC) represent the community college's best interests and to assist college employees in effective online communication. The policy is designed to help employees leverage the power of social media and provide guidelines and "best practices" when posting material online. These guidelines are broad in nature. Social media technology is evolving and no policy or procedure can address all the particular situations and circumstances that may arise. This Social Media Policy only applies to social media accounts created to represent College groups, departments, programs, entities, etc., and does not apply to private individual accounts.

Social media has been an important tool in communicating and interacting with the community. Currently, the College's website supports the following social media sites: *Twitter, Flickr, Facebook, Pinterest, Linkedin, Vimeo* and *YouTube.* These sites are monitored and updated by the Office of College and Community Relations in collaboration with the Campus Web Designer/Developer.

D.2.b. Action Plan
This plan supports Priority 4, *Impact on a broad student population across multiple disciplines*. The goal is to utilize social media tools to provide information to the College community and the public.

Action Step	Who	Start Date	Status
Create accounts	CELTT	Jul 2013	Completed
Evaluate content	CELTT	Aug 2013	Completed
Define roles	CELTT; OCCR	Mar 2014	Completed
Update content	CELTT; OCCR	Apr 2014	Ongoing

D.3. Two-Way Radio Repeater – System Upgrade

D.3.a. Current Status
The primary use of two-way radios is to allow personnel to respond to campus emergencies. The secondary use is for day-to-day operations. A repeater is a communications device that transmits at a much higher wattage than typical portable radios, allowing for a much larger coverage area. An assessment will be done to see if the radio system can be improved for an emergency response, while retaining day-to-day operational capability. The current system is 20 years old.

D.3.b. Action Plan
This plan supports Priority 1, *Health and safety*. The goal is to improve the College's emergency response capability by increasing 2-way radio coverage and clarity of transmission.

Action Step	Who	Start Date	Status
Define system parameters	Campus Security	Jun 2014	Completed
Contact vendor to review system	CELTT	Jul 2014	Completed
Estimate cost to improve system	Vendor	Jul 2014	Ongoing
Install system improvement	Vendor	Nov 2014	

| Test system | Campus Security | Nov 2014 | |
| Deploy | CELTT | Dec 2014 | |

D.4. Replacement Cycle for Two-Way Radios

D.4.a. Current Status
Campus Security and Auxiliary Services radios are over 8 years old; both need replacing.

D.4.b. Action Plan
This plan supports Priority 1, *Health and safety*. CELTT established a replacement cycle to ensure College emergency response capability is maintained. The first radios to be replaced in this cycle will be campus security radios.

Action Step	Who	Start Date	Status
Inventory and define replacement cycle	CELTT	Jun 2014	Completed
Identify Security radio replacement	Campus Security	Jun 2014	Completed
Purchase	CELTT	Jun 2014	Completed
Deploy	Campus Security	Jul 2014	Completed

D.5. Cable TV System

D.5.a. Current Status
Time Warner Oceanic Cable provides a cable feed drop to the College. Signal amplifiers are distributed throughout the College. These amplifiers are 18 years old and need replacement.

D.5.b. Action Plan
This plan supports Priority 1, *Health and safety*. Upgrading will ensure the College can continuously monitor live news feeds during a state or national emergency and provide up-to-date information.

Action Step	Who	Start Date	Status
Assess amplifier status	CELTT	Jun 2014	Ongoing
Obtain price quote for upgrade	CELTT: Instructional	Aug 2014	Ongoing
Research alternatives	CELTT	Oct 2014	Ongoing
Purchase	CELTT: Instructional	Mar 2015	
Install	Vendor	Jun 2015	

D.6. Cellular Service, Voice and Data, Coverage

D.6.a. Current Status
Voice and data capacity at the College is limited. There are also many "dead" zones. During recent campus emergencies people could not make cellular calls.

D.6.b. Action Plan
This plan supports Priority 1, *Health and safety*. The goal is to expand cellular voice and data capacity and to improve coverage.

Action Step	Who	Start Date	Status
Discuss with vendor & security	CELTT	Jul 2014	Completed
Assess coverage	Vendor	Aug 2014	Completed
Determine antenna locations	Vendor	Aug 2014	Completed
Propose plan	Vendor	Nov 2014	
Install	Vendor	May 2015	

D.7. Intranet

D.7.a. Current Status
The Intranet is outdated and hard to navigate. The Intranet will be updated with input from the College.

D.7.b. Action Plan
This plan will support Priority 3, *Core service and support*. The goal is to improve access to content and reorganize information.

Action Step	Who	Start Date	Status
Discuss and agree to procedures for developing site	CELTT; Campus	Feb 2015	
Discuss areas for improvement	CELTT; Campus	Mar 2015	
Discuss content migration	CELTT; Campus	Apr 2015	
Propose design	CELTT	Jun 2015	
Agree to design and content migration	CELTT; Campus	Oct 2015	
Deploy test site and get feedback	CELTT	Feb 2016	
Modify site	CELTT	May 2016	
Release site	CELTT	Jan 2017	

D.8. Phone PBX System

D.8.a. Current Status
The number of licensed voice-over-IP (VOIP) phone connections the College has contracted going through the PBX system is 575. Currently all lines are being used. The last line was issued on August 25, 2014. The College cannot issue new VOIP connections. CELTT is in the process of looking for any unused connections previously issued. An unused connection may be reassigned to fill a request for a new connection. Finding an unused connection is time consuming. No current data exist on issued connections. CELTT is in the process of obtaining a quote for additional licenses.

D.8.b. Action Plan
This plan supports Priority 3, *Core service and support*. The goal is to gain accountability for issued lines while still being able to service the College.

Action Step	Who	Start Date	Status
Obtain a quote for new licenses	CELTT; Vendor	Aug 2014	Ongoing
Find unused connections to recycle	CELTT	Aug 2014	Ongoing
Inventory currently issued connections	CELTT	Sep 2014	Ongoing
Purchase new licenses	CELTT	Oct 2014	

D.9. Analog Lines

D.9.a. Current Status
The number of analog lines the College has contracted is 96. Currently all lines are being used. The College cannot issue new analog lines. CELTT is in the process of looking for any unused lines previously issued. An unused line may be recycled to toward a request for a line. Finding an unused line is difficult and is done on a trial and error basis. No current data exists on issued lines. CELTT is in the process of obtaining a quote for additional lines. Fax machines, security cameras and security call boxes use analog lines.

D.9.b. Action Plan
This plan supports Priority 3, *Core service and support*. The goal is to gain accountability for issued lines while still being able to service the College.

Action Step	Who	Start Date	Status
Obtain a quote for new lines	CELTT; Vendor	Aug 2014	Ongoing
Find unused lines for recycle	CELTT	Aug 2014	Ongoing
Inventory currently issued lines	CELTT	Aug 2014	Ongoing
Purchase new lines	CELTT	Sep 2014	

D.10. Kiosk and Emergency Information Pilot

D.10.a. Current Status
Currently, the campus uses email, *Twitter*, *Facebook*, and the website as methods of notification of emergency information to the College community. While these avenues of communication work, the College seeks to improve its emergency preparedness measures. It is critical to the College community to have an emergency communication system that is instant and wide-reaching. A kiosk system will augment current methods of notification. A pilot test will be conducted. It is important to define the procedures by which emergency alert information is to be disseminated through this system. During non-emergency times the system will be used to provide public information to the College community. Defining content creators and management for the public information will be done.

D.10.b. Action Plan

This plan supports Priority 1, *Health and safety*. The goal is to expand the distribution of information. Kiosks would be placed in high student traffic areas.

Action Step	Who	Start Date	Status
Define process for alert	CELTT	Jul 2014	Ongoing
Define content creation and management	CELTT	Jul 2014	Ongoing
Identify a locations for pilot test	CELTT	Jul 2014	Completed
Identify system	CELTT	Oct 2014	
Purchase	CELTT	Feb 2015	
Deploy	CELTT	May 2015	
Assess effectiveness	CELTT	Aug 2015	
Recommendation report	CELTT	Nov 2015	

E. Instructional Support

E.1. Distance Learning Technologies

E.1.a. Current Status

On campus credit and noncredit offerings are made available via appropriate technologies to students who are qualified and are committed to pursuing post secondary education, but who cannot attend as regular on campus students.

The College provides students an opportunity to access higher education courses and programs via distance learning technologies at anytime, from anywhere. Over 130 interactive television, cable, and internet course offerings are designed to combine individual and group activity with interaction between and among students and the instructor. Many of these technologies are provided by UH System and UHCC System, such as the learning management system Laulima (Sakai) and the Hawai'i Interactive Television System (HITS), and Brainfuse (online tutoring). The College has also entered into contracts with vendors to provide services such as Blackboard Collaborate.

E.1.b. Action Plan

This plan supports Priority 4, *Impact on a broad student population across multiple disciplines*. The goal is to improve instructional delivery and quality.

Action Step	Who	Start Date	Status
Investigate new strategies using current systems	CELTT	Jul 2014	Ongoing
Research trends and directions	CELTT	Oct 2014	
Investigate new systems of delivery	CELTT	Feb 2015	
Investigate new strategies	CELTT	May 2015	
Recommendation report	CELTT	Jan 2016	

E.2. Faculty Evaluations

E.2.a. Current Status
Feedback from various college forums suggests that use of the current online faculty evaluation survey, eCafe, needs improvement. The focus will be to increase student participation in completing the survey.

E.2.b. Action Plan
This plan supports Priority 4, *Impact on a broad student population across multiple disciplines*. The goal is to improve instructional delivery and quality.

Action Step	Who	Start Date	Status
Identify alternate strategies	CELTT	Jan 2015	
Identify alternate technology solutions	CELTT	Jan 2015	
Report findings to the College	CELTT	Sep 2016	

E.3. Educause Center for Analysis and Research (ECAR) Study

E.3.a. Current Status
The ECAR study helps institutions learn how students and faculty experience technology and expect to use technology in their academic lives. The study consists of two surveys, one for students and one for faculty. Data provided will help the College plan future technology growth. Participating in the study will also provide the College with comparative data from other institutions.

E.3.b. Action Plan
This plan supports Priority 4, *Impact on a broad student population across multiple disciplines*. The goal is to identify trends and expectations of both students and faculty.

Action Step	Who	Start Date	Status
Identify a survey administrator	CELTT	Sep 2014	
Review ECAR resources	CELTT	Sep 2014	
Complete intent to participate form	CELTT	Oct 2014	
Participate in study	CELTT	Feb 2015	
Report to College	CELTT	May 2015	

E.4. Digital Textbooks

E.4.a. Current Status
Faculty have been using digital textbooks for years, providing students with several options including print, online texts, and downloadable digital textbooks. This is a trend that will continue and is part of the larger conversation around mobile devices, as some texts may be limited to specific devices. The recent adoption of digital texts by the Culinary Arts Program is a good example of this kind of innovation. The unit's tactical plan (prior to the adoption of the

Comprehensive Program Reviews) included plans for a transition to electronic textbooks so that by fall 2015, all Culinary students will be required to have their own iPads loaded with electronic versions of their textbooks. During the first phase in fall 2013, *Fundamentals of Cookery* students were asked to bring their own existing iPads or purchase their own iPads and load them with the Inkling version of the Professional Chef textbook instead of purchasing a hard copy textbook which lacks learning resources such as streaming videos. Students who cannot meet this requirement can participate in a loaner program with the Culinary department. The department plans for implementation of electronic textbooks in four classes over the next four semesters with the ultimate goal of all its classes using digital texts by fall 2015.

E.4.b. Action Plan
This plan supports Priority 4, *Impact on a broad student population across multiple disciplines*. The goal is to determine the level of success of implementation and develop recommendations for the College.

Action Step	Who	Start Date	Status
Interview faculty	CELTT	Nov 2014	
Survey students	CELTT	Dec 2014	
Complete report with recommendations	CELTT	May 2015	

F. Campus Renovation Projects

F.1. Lama Building

F.1.a. Current Status
During the summer of 2014 Lama Building began renovating a section that will include an upgraded electrical and network infrastructure.

F.1.b. Action Plan
Priority 2, *Campus-wide infrastructure and network security*. The goal is to ensure adequate networking resources are planned for in the renovation.

Action Step	Who	Start Date	Status
Review plans	CELTT; Library	Jun 2014	Completed
Discuss with vendor	CELTT; Vendor	Jul 2014	Completed
Install network resources	Vendor	Aug 2014	Ongoing
Inspect work and resolve issues	CELTT; Vendor	Sept 2014	
Sign-off on work	CELTT	Oct 2014	

F.2. Future Campus Renovation Projects

F.2.a. Current Status

Campus renovations will be implemented based on available funding. CELTT will be in discussion with these planning groups and anticipates work in technology infrastructure development, equipment purchases, and installation for new construction and building renovations.

Construction/renovation projects	Expected timeframe
Culinary Institute of the Pacific	Oct 2014 - Dec 2015
Lama Building	Oct 2014 - Sep 2019
ʻIliahi Building	Oct 2014 - Sep 2019
ʻIlima Building	Oct 2014 - Sep 2019
ʻŌhiʻa Building	Oct 2014 - Sep 2019
Mokihana Building	Oct 2014 - Sep 2019
Manono Building	Oct 2014 - Sep 2019
Kopiko 1st floor	Oct 2014 - Sep 2019
Kauila Health Program classrooms	Oct 2014 - Jun 2015
Lçʻahi Building	Jan 2015 - Sep 2018

F.2.b. Action Plan

This plan supports Priority 2, *Campus-wide infrastructure and network security*. The goal is to ensure adequate networking resources are planned for in the renovations.

Action Step	Who	Start Date	Status
Conduct needs analysis	CELTT; Departments	TBD	
Review plans and recommend changes as needed	CELTT	TBD	
Discuss plans with vendor	CELTT; Vendor	TBD	
Monitor construction for compliance	CELTT	TBD	
Install network resources	CELTT; Vendor	TBD	
Inspect work and resolve issues	CELTT; Vendor	TBD	
Sign-off on work	CELTT	TBD	

G. Information Security

G.1.a. Current Status

The College's information security efforts are aligned with the University of Hawai`i Information Security Program (live link, link[6]). Firewalls have been erected throughout the campus and a process for balancing the information security restrictions and information needs of faculty and students is determined on a case-by-case basis.

Under the direction of the CELTT coordinator the following practices have established.

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[6] University of Hawaiʻi, "UH IT Security Website", Archive Link: http://hdl.handle.net/10790/2278

- Registration of all campus servers with UH ITS
- Participation in UH Information Security Compliance Assessment
- Completion of the UH Maintenance of Sensitive Information Survey by all College data custodians annually
- Performance by CELTT of follow-up activities after survey data is reported
- Establishment of groups/tiers of users based on risk
- Mandated semi-annual or annual training on state and University information security policies based on tiers of users
- Execution of Identity Finder on all campus computers to detect the presence of sensitive information
- Delivery of hands-on workshops for campus employees on malware prevention and management
- Use of the UH Wireless Authentication System
- Meetings with the University of Hawai'i System ITS on system updates as breaches occur.

G.1.b. Action Plan

This plan supports Priority 2, *Campus-wide infrastructure and network security*. The goal is to ensure continued diligence in providing information security.

Action Step	Who	Start Date	Status
Research ongoing trends and threats	CELTT; Department	Jul 2013	Ongoing
Consult with ITS on a regular basis	CELTT	Jul 2013	Ongoing
Notify campus of existing threats	CELTT; Vendor	Jul 2013	Ongoing
Advise and train campus on safe practices	CELTT	Jul 2013	Ongoing
Research new products and test	CELTT; Vendor	Jul 2013	Ongoing
Investigate and contain breaches	CELTT; Vendor	Jul 2013	Ongoing
File reports on breaches	CELTT	Jul 2013	Ongoing
Review procedures for antivirus and information security software maintenance	CELTT; ITS	Feb 2014	

III. Funding

General Funding Objectives

As the centralized manager of IT for the College, CELTT established the following general funding objectives:

- Staff and operations computer replacement on a five-year cycle; general student labs replacement on a five-year cycle.

- New, expanding, and existing labs, and other technologies, to undergo feasibility and

sustainability review and college-wide approvals.

- Unique programmatic needs to be funded and supported through individual program review / resource prioritization.

The College proposes to fund its Technology Plan by following:

1. Allocations of general funds from the State and tuition and fees. The College assesses its available funding annually and regularly, and utilizes funds to support collegewide needs through program review prioritization during its annual budgeting process.

2. External funds: The College works to identify other funding sources such as grants to expand, upgrade, and update computer and related technology on campus.