

2017-18

ANNUAL REPORT

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Executive Summary

Introduction

I am pleased to submit to you the 2017-18 Annual Report for Information Technology Services. This past academic year, the ITS Team worked with Divisions and Departments across the Campus in streamlining processes and improving efficiencies with the use of innovative technologies. We implemented systems and software in support of GI2025, Q2S Conversion, Implementation of the University Strategic Plan and the ITS Strategic Plan. As we move into the new academic year, we are looking forward to collaborating with our students, faculty and staff in serving the academic mission of the University.

Samuel Sudhakar, Ph.D.

Vice President for Information Technology Services and CIO



Operational

World Class Customer Service
Making sure all our systems and support are optimal, available, secure, and accessible 24/7/365

Tactical

Q2S, GI2025,
University Strategic Plan,
ITS Strategic Plan

Strategic/Innovation

Mobile/AI First Project, Faculty Led
Research Support, Automation,
UAnalytics, Immersive Technologies,
Cloud Migration, Tech Zones
for Students

The Information Technology Services leadership team started the academic year with a retreat facilitated by Educational Advisory Board (EAB), focused on fostering innovation to support the Graduation Initiative 2025. Recognizing that innovation requires institution wide collaboration, we invited technology leads from Colleges as well as the Institutional Research (IR) team to be a part of this leadership retreat.

At Information Technology Services, innovation drives our pursuit to foster and support the academic mission of the University. The innovative projects that our team is pursuing at the moment support the tactical objectives of the University Strategic Plan, the ITS Strategic Plan, Quarter to Semester Conversion and the Graduation Initiative 2025. Tactical projects then become operationalized to create room for ongoing innovation.

Operational Initiatives

- In addition to sending staff from the Technology Support Center to professional development opportunities, we shored up our afterhours technology support by partnering with Blackbelt Help, a leading provider of help desk products and services supporting higher education.
- The Information Technology Service Management (ITSM) project using Cherwell, approved by the IT Governance Executive Committee is under implementation with a scheduled go live date of August 1, 2018.
- The lead College Technology Professionals started a dual reporting relationship with the College Deans and Central ITS in January 2018, putting in motion Phase I of the ITS Efficiency Plan that is expected to improve the services we provide our Campus Community while reducing redundancies and inconsistent service levels across the Campus.
- The first 24/7 Study Space opened in the Wedge of the Library in fall 2017, giving students an ability to collaborate and study with technology support. Technology Support was increased to 6am to 12 Midnight on weekdays and 7am and 7pm on weekends.
- The Annual ITS Tech Days, OktoberTech was highly successful here at the San Bernardino as well as the Palm Desert Campuses. The LA Times ran a nice article about the event and how it helped us connect with our students, faculty and staff: <http://highschool.latimes.com/california-state-university-san-bernardino/oktobertech-event-brings-new-gadgets-and-tech-for-students/>
- Cal State San Bernardino was the recipient of the inaugural E&I Cloud Leadership Awards for its work on cloud storage in serving the university's needs. The awards recognize members of the [E&I Cooperative Services](#) for their innovations in cloud solutions. The awards are sponsored by [Adobe](#), [Cisco](#), [Microsoft Azure](#) and [CDW•G](#). A total of 24 awards across six categories and 18 honorable mentions were given from almost 100 nominations for categories that include cloud storage, disaster recovery, collaboration and innovation. Winners were recognized during the [EDUCAUSE Annual Meeting](#) in Philadelphia, Pa., on Thursday, Nov. 2. CSUSB received its award in Category 2 – Cloud Storage. Also in this category are Arizona State University, Lee College (Baytown, Texas) and the University of North Carolina at Greensboro.
- The 2018 ITS TechTalks open expo brought together the CSUSB faculty community at the SMSU Event Center on April 17th with a total of 91 attendees.
- The ITGEC approved the implementation of DUO multi-factor auth for faculty and staff with access to sensitive data on campus systems. To date 600 faculty and staff are on DUO multi-factor authentication.

Tactical Initiatives

There were four tactical initiatives that the ITS Team supported this past year:

Graduation Initiative 2025

- University Analytics team, a collaboration between ITS and IR ramped up its efforts to provide Deans, Chairs, Faculty and Advisors timely and relevant data for decision making
- Launched MyCap (My Coyote Advising Pathway) to enable students to plan out their academic pathway at CSUSB
- The new MyCoyote Portal and the Mobile App with built in Artificial Intelligence unifies the student success ecosystem and streamlines student academic pathways towards graduation.
- The Rapid Data Analytics Sub Committee of the GI2025 Steering Committee launched the Faculty Data Fellows Program to engage faculty in each college to use data to identify barriers to timely graduation. The CSUSB GI2025 conference themed Collaboration, Coherence and Commitment, on May 10th showcased campus efforts towards furthering the GI2025 initiative.

Quarter to Semester Conversion Process

- Fit Gap Analysis completed and programming started for Q2S Conversion
- Launched Course Leaf Curriculum module to enable streamlining of curriculum development process
- Launched a unified facility scheduling system – EMS for academic and event scheduling, to enable efficient use of space across the SB and PD Campuses

University Strategic Plan

There were several elements of the University Strategic Plan that required technology infusion. The ITS Team has worked with several constituents across the Campus in helping with the implementation of the University Strategic Plan.

In collaboration with the TRC, we increased professional development opportunities for faculty to integrate technologies into their curriculum and the teaching learning processes. (1.1.1)

- Technology infrastructure for the Faculty Center for Excellence and the Staff Development Center (2.2.1 & 2.5.1)
- Mobile Application Launch for tracking Community Engagement (4.2)
- Automation of Forms and Processes – Office of the Registrar, Financial Aid, Curriculum, Events/Academic Scheduling (3.4.2)
- Implementation of a Research, Scholarship & Creative Activities Tracking System – Interfolio Implementation (2.1.2)
- Website Development (5.4.2)
- Alumni Database Improvements (5.5.3)

ITS Strategic Plan

The ITS Team successfully completed all the goals and objectives of the second-year implementation of the ITS Strategic Plan – Please see appendix for details. Highlights of the second-year implementation were:

Information Technology Services Strategic Plan

We have successfully completed the implementation of year two of the ITS Strategic Plan. Milestones achieved include:

- Developing Self evaluating or peer review tools for online courses
- Support faculty to become QOLT certified reviewers
- Develop an online teaching academy pilot
- Increase campus participation in CO Grant initiatives
- Consolidate the number of servers/systems and increase operational efficiency
- Implement Multifactor Authentication
- Enhance Wireless Coverage and Carrier Coverage throughout SB and PDC Campuses

Please see appendix for a complete list of projects that have been completed.

Strategic/Innovative Initiatives

Infrastructure to Support Faculty Led Research

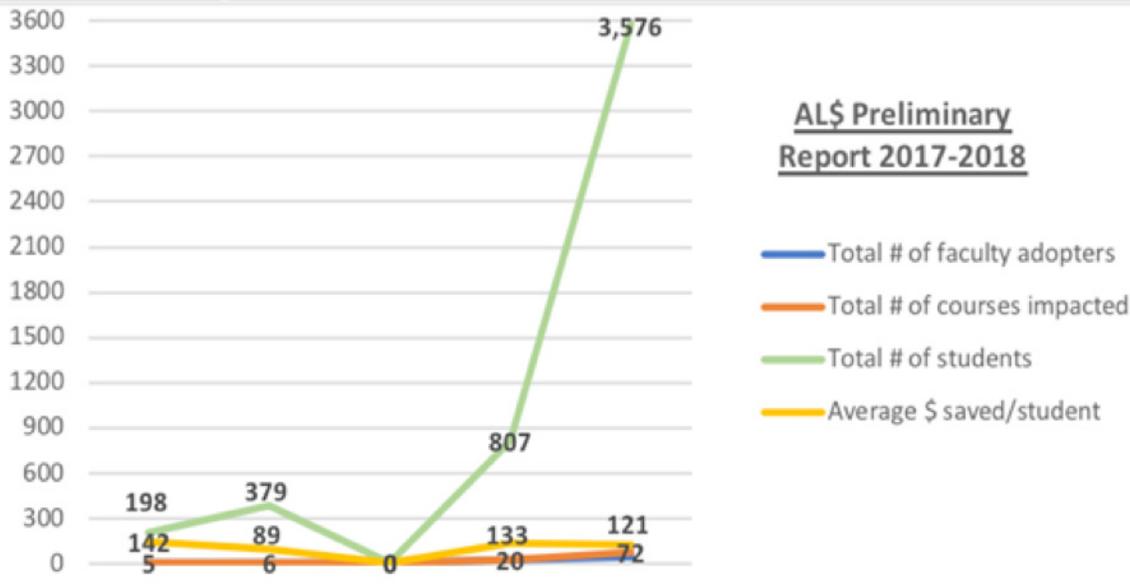
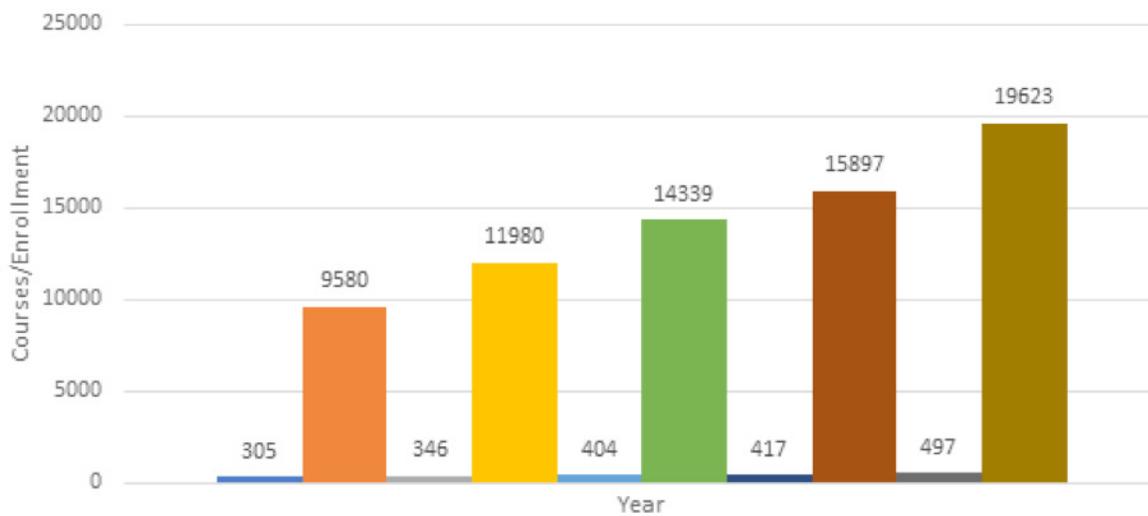
The Campus recently partnered with the Pacific Research Platform (PRP), a science-driven high-capacity data-centric “freeway system” on a large regional scale (<http://prp.ucsd.edu/>). The CSUSB ITS Division recently established a Data Transfer Node for the University’s network to connect to resources on the PRP. Through this partnership and infrastructure on Campus, CSUSB will be able to accommodate high performance and high throughput computing from several grant funded programs in Physics, Chemistry, Geology, Cyber Security and Water Resources Institute. We are currently working with faculty researchers on a pilot mode to test the infrastructure and hope to roll it out to the greater faculty community in the fall.

California State University San Bernardino is one of the eight CSU Campuses that will be upgraded to a 100 Gig link to California Research and Education Network (CalREN) operated by CENIC (<https://cenic.org/about/about-overview>). Currently the Campus has two 10 Gig links. One of the reasons CSUSB was chosen for this upgrade was its focus on supporting faculty led research.

Immersive Technologies Projects

- The CSUSB Immersive Technologies team received a \$10,000 Innovation award from the Chancellor’s Office for establishing a VR Lab and creating content for CSUSB and CSU
- The Team presented at the CSU Innovation Summit held at San Diego State, the state-wide innovation showcase webinar and at the Internet2 Conference
- Chemistry Professors Larry Mink and Andreas Beyersdorf were recognized by the CSU for their cutting-edge work on Adaptive learning Technologies.
- Online and Hybrid Course Growth
- Affordable Learning Initiative Growth

Online and Hybrid Courses and Enrollment 2014-2018



Process Automation Projects

The University Strategic Plan called for the automation of twenty-five University wide processes in five years. Over the past three years, we have worked with different departments to automate several processes including the International Travel Authorization Form, the Computerized Information Access form, the delegation of authority form, faculty grade change form and the curriculum approval process.

We are currently working with the Financial Aid Office and the Office of the Registrar and have identified ten processes in each of those areas to automate. Ten processes each in the Office of the Registrar and the Office of Financial Aid have been automated, including the Graduation Check application process which will substantially save time and resources for our students. We are continuing to look at different processes and systems that can automate these processes. Please see attached appendix.

Cloud Migration Roadmap

We have adopted a Cloud First strategy in that every greenfield application will be a SaaS or IaaS. We are working with internal teams and the Chancellor's Office to identify brownfield applications that can be moved to the Cloud to improve efficiency and reduce fixed operating costs. The ECS team spent a day with Gartner Consulting in testing the Cloud Decision framework that Gartner will be proposing to the CSU. The five year Cloud Migration roadmap will be presented to the IT Governance Executive Committee in fall 2018.

Tech Zones

We are working closely with the ASI and other student organizations to identify and implement tech zones across Campus. These tech zones will serve as technology hubs in which students can experiment with latest technologies such as Amazon Echo, Google Home, One-button studio, Light board, VR and AR platforms.

People First @ ITS

Based on Conversation with ITS Staff in the spring of 2016, the ITS leadership team launched two task forces to improve communication within ITS and to develop career pathways for staff for professional development and career advancement. Staff participated in multiple workshops over the last two years. Last fall we launched OfficeVibe, an employee engagement and feedback tool through which we continue to collect thoughts and ideas from employees.

We continue to implement recommendations of the two task forces. The recommendations can be found in the Appendix.



We believe that in order for ITS to continue to innovate and provide world class customer service, we need to put our employees first and give them meaningful opportunities to grow their professional skills and careers. To this end, we will continue to engage with our team members and allow them to help us launch programs and initiatives that will prepare them to achieve their professional aspirations.

Accessible Technology Initiative

The Accessible Technology Initiative (ATI) has made significant strides under the guidance and leadership of the ATI Steering Committee and Sub Committees. The attached appendix shows the measurable advances that the university has made in continuing to support our students, faculty and staff with disabilities.

Vital and Expanded Technologies Initiative

This year the VETI grant focused on projects that advanced the GI2025 initiative, technology projects at the Palm Desert Campus and projects that advanced technologies for students, faculty and staff with disabilities.

The VETI Committee received 25 grant proposals totaling \$1.02 Million. The committee reviewed these proposals and deliberated on funding recommendations. Attached are the projects that will be funded for the upcoming fiscal year starting on July 01, 2018.

Administrative Computing and Business Intelligence (ACBI)

Highlights

Projects that promote Student Success:

The new MyCoyote Portal and mobile App will unify the student success ecosystem and streamline student academic pathways towards graduation. More responsive and capabilities for student PeopleSoft pages.

Data Warehouse/Coyote Pulse – provide analytical data to the university

Provide more functionality with the PAWS Degree Audit System

Enhancing MyCap (My Coyote Advising Pathways) to enable students to plan out their academic pathway

EAB Enhancements:

- Identifying transfer student cohorts
- Quarter vs. Semester Completers
- Graduation Checks (Pending)
- Consolidated Reporting
- Graduation & Retention Specialist (GRS) Campaigns

Changes to FTF registration behavior to go through MyCap and Schedule planner

Automating the graduation check process

Provide students with a class search page with more options

Populate student data and credential data to Advancement System

Projects that promote Faculty and Staff Success:

Laying the foundation for the Common Human Resources System (CHRS) which will unify all CSU's.

Deploying a new MyCoyote Portal/Mobile application with some responsive PeopleSoft pages.

Provide Faculty with better tools to search for classes in PeopleSoft.

Provide data for analytics.

Quarter to Semester Implementation:

- Fit Gap Analysis for Q2S including PeopleSoft and PAWS.
- Launched CourseLeaf Curriculum Module (CIM) to enable streamlining and workflow for the curriculum development process.
- For Q2S, provide one place for faculty and advisors to go to get the information they need to do their jobs more efficiently.

For EO1110, provide tools to assist with the setup such as major pathways process and PeopleSoft queries.

Event Management System (EMS) for Events Scheduling and Student Union events.

EMS rollout for Academic Scheduling. Utilize the Optimizer tool for better class scheduling. Retire the AdAstra System.

1098T Conversion to PeopleSoft.

Continue to enhance the College of Education Credential Module built by CSUSB in PeopleSoft.

Office of the Registrar automation tasks:

- Online Grad Check – Partially funded by the Innovation Challenge and Vital Technology Grant. Technical processes are complete. Ready for the Office of the Registrar to rollout.
- Credit by Exam – Ready to move to production for a soft rollout.
- Change of Major – Still working on technical implementation. Partially funded by the Vital Technology Grant.
- Online course substitution workflow – Evaluating Fresno's project

Financial Aid automation tasks:

- Summer Packaging processing
- Cal Grant Processing and Repackaging Aid
- Federal Loans Packaging and Processing
- Process for electronic signing of Level 1 documents
- Scholarships process to integrate into PeopleSoft
- DREAM Cal Grant Packaging

ACBI is engaged in several PeopleSoft Integration projects:

- StarRez – Housing solution that is cloud delivered, web-based, and PCI Certified
- ALMA – CSU’s Systemwide Library System
- TMA – Facilities Maintenance Management System
- Online Directory
- InnoSoft Fusion – Recreation and Wellness new software that manages their sports facilities with powerful, adaptable, and secure recreation management software
- ITS – Cherwell Ticketing System
- Radius CRM by Campus Management – Admissions and Recruiting software to empower our campus to improve prospect communications, event planning and registration
- Interfolio – Faculty 180 – The new standard in Faculty Activity Reporting.

Projects for Sustainability and Expansion

- PeopleSoft CS 9.2 Upgrade & HR Split
- CFS 9.2 MP 3.0 and PeopleTools 8.55 upgrade
- Infrastructure changes mandated by CO such as the recent data center move from Utah to California.
- Migration of ACBI Servers to VM for better management
- CLEO Harmony Upgrade in process for managing file transfers
- Oracle ODA Appliance for better management of ACBI Oracle Databases

Assessment

- Last year we went paperless for the grade change process. These has been well received by the CSUSB community and many grade changes have been processed through this automated workflow system. **Since implemented in June 2017, there were 4,393 grade changes requested.**
- With the PeopleSoft CS 9.2/HR Split Upgrade, CSUSB created tools to help us track our modifications. Many of the other CSU’s requested for us to share the tools with them.
- We implemented CLEO for an automated process for securely handling our file transfers. This system will notify us when there are failures via email. In the past we waited for someone to tell us that they were not receiving our files.

Looking Ahead

Q2S PeopleSoft Technical Project.

Q2S College Source Degree Audit (PAWS) and Degree Planner (MyCap) project.

GI2025 project:

- Preload myCap with courses for a select group of students for Fall 2018
- MyCap courses to feed to Schedule Planner
- Register button added to Schedule Planner to automatically register student into PeopleSoft.

Common Human Resources System (CHRS) Project. Designed to create a single HR data management system for all of the CSU. Continue with the stabilization and review of current processes and develop new processes based on the new criteria.

Recruiting PageUp Project. Replace the recruiting portion of NeoGov with PageUp.

SumTotal Project for replacing/upgrading the SkillSoft training database.

Advance 2017 upgrade project.

Analytics/Data Warehouse projects.

MyCoyote Portal and Mobile Application Enhancements. Phase II. Continue to work on enhancing MyCoyote and messaging through the portal.

Automation Projects and workflow:

- Online Grad Check – Begin rolling it out to be used by our potential graduates and the automated processes by the graduating offices
- Credit by Exam – Automated process ready for testing and soft rollout
- Online change of Major – Just started the design phase. Partially funded by the VTI Grant.
- OnBase OCR (Optical Character Recognition) program – OTR project will enable scanning and inputting transcripts from our major feeder schools. This will begin in August 2018.
- Design an Online Course Substitution and Exception Workflow
- Review Humboldt mod for course/exception substitution
- Cal Grant Processing and Repackaging Aid
- Federal Loans Packaging and Processing

- Process for electronic signing of Level 1 documents
- Artificial Intelligence (AI) response system for Financial Aid
- Scholarships process to integrate into PeopleSoft – Kickoff 2 weeks ago
- DREAM Cal Grant Packaging
- OnBase Scanning

PeopleTools Upgrade for HR and SA to go live June 2019.

Continue to enhance the College of Education Credential Module built by CSUSB in PeopleSoft.

Academic Technologies and Innovation (ATI)

Highlights

- **Learning with Immersive Technologies** (faculty and student success)
 - » In collaboration with Profs. Robertshaw (Anthropology), Berdan (Anthropology), Vance (Music), Collins (Art) and Hou (Computer Science), ATI is developing a fully immersive VR archeological simulation, Project Ambrosia, that teaches students the equipment and practices of archeology. The project is entirely programmed by students, working in collaboration with faculty and ATI/ITS personnel.
 - » Funds from a VETI grant helped to purchase VR development hardware and support student VR programmers.
 - » Project Ambrosia was featured during the Educause two-day online event, eXtended Reality (XR): How AR, VR, and MR Are Extending Learning Opportunities.
 - » Insta360one camera used for 360 Immersive video productions with the journalism department for the Bonanza Springs production and Communications 365 experimental media class.
- **Adaptive Learning:** Instructional designer Jonathan Brooks worked with Drs. Andreas Beyersdorf and Larry Mink (Chemistry) to implement online adaptive learning homework in CHEM 216. Their work was awarded the Silver award in the Supporting Student Success category at the Cal State 2018 Tech Conference.
- **Supporting Active Learning (faculty and student success)**
 - » Since 2015 when ATI renovated the first Active Learning Space in PL015, the number of active learning spaces increased to 15 by the end of Spring Quarter 2018. Several of the new active learning spaces received funding from VETI such as the Movement Lab in the PE building and the Marketing Department's Active Learning Lab.
- **Tech Zone for Students** (student success)
 - » We are working closely with the ASI and other student organizations to identify and implement tech zones across Campus. These tech zones will serve as technology hubs where students can experiment with latest technologies such as AI (Amazon Echo, Google Home), One-button studio, Light board, VR and AR platforms.
 - » The first Tech Zone is established in the Cross Cultural Center in the SMSU where we have installed a one-button studio for students to record their presentations. A Dell Canvas computer for multimedia creation and editing is also available.

- **Affordable Learning Solutions** (student success)
 - » During 2017-18, a total of 45 faculty members participated in the AL\$ program by adopting more affordable instructional materials.
 - » 72 courses and 3,576 students were impacted for a total of \$432,755.42 saved in instructional materials.
- **Accessible Technology** team held an inaugural event to train campus members on accessibility best practices on campus. The three hour workshop was organized to coincide with Global Accessibility Awareness Day on May 17th and was well attended. The event is geared to encourage campus constituents to consider accessibility at the time of content creation. This is also an opportunity to advertise accessibility services to assist faculty and staff with remediation of existing inaccessible content:
 - » Video captioning
 - » Audio transcription
 - » Document remediation
 - » Blackboard course evaluation
 - » An additional event is planned for the Palm Desert Campus during the summer.

Assessment

- ATI organized 26 workshops and two showcases with 102 attendees (70 unique participants) from 22 departments
- 10 faculty from 8 departments presented their teaching innovations at the Spring 2018 Faculty Showcase on June 1, 2018 (organized in collaboration with the TRC and Pfau Library)
- Dr. Frank Lin (Information Decision Science), Dr. Jonathan Anderson (Public Administration) and Prof. Delia Ortega (Ethnic Studies) received QM course certifications. Prof. Ortega's is the first hybrid course to be certified on our campus.
- In collaboration with Academic Research, ATI organized two institutes on academic research technologies, JMP and R, attended by 43 faculty members.
- Dr. Bibiana Diaz, Affordable Learning Solutions (AL\$) Coordinator, received a grant of \$24,489 to support campus AL\$ initiatives
- Dr. Mihaela Popescu, Quality Assurance Campus Lead, received a grant of \$15,000 to support campus online/hybrid course development
- ATI Immersive Technologies group received a VETI award of \$62,399 to support the expansion of the ATI VR Lab

Looking Ahead

- Accessible Technology Received VETI/Student Success Initiative Grant Funding for two proposals
 - » Blackboard Ally Pilot: Increase Accessibility of Course Content in LMS \$14,492.00
 - » Expanding Equal Access to Technology \$10,500.00
 - » Proposal one will fund a pilot to install and configure the Blackboard Ally tool that alerts professors to the accessibility of their online course materials, and also provides those materials automatically in various accessible formats. The program will be piloted with the MPA degree online program.
 - » The second proposal will update adaptive equipment at the ATAC lab, including creating a fully functioning workstation to enhance access for individuals with more severe physical impairments. Additionally, adding laptops to the already popular Library laptop lending program that will provide assistive technology.
- ATI is working with Drs. Liliana Gallegos and Bibiana Diaz to add 360-degree video assignments to their curriculum. Additionally, ATI will collaborate with the College of Education to incorporate AR and 360-degree video into their Sports Disability Festival.
- Starting in the summer of 2018, ATI will be working with the departments of Art, Communication Studies, and Music to convert CAL's Center for Digital Media (UH 043) into an active learning space for multimedia and VR production.

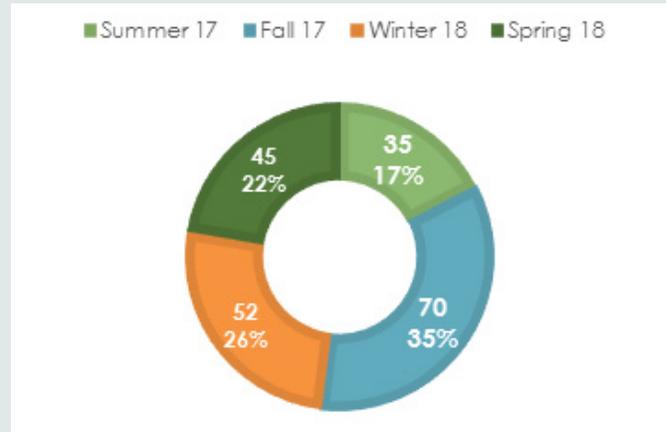
Distributed Technology Services (DTS)

Highlights

College Support

Conducted with collaboration of college techs, the DTS team resolved a total of 202 support tickets and answered calls at the TSC from faculty, staff and students. They also assisted the College of Social and Behavioral Sciences, Arts and Letters, and other colleges as needed.

In order to further assist the College of Arts and Letters, they assumed technical support for the Coyote Radio Station and Coyote Advertising in Spring, 2018.



Merge with Classroom Support

The Classroom Support team was moved under DTS in Spring, 2018 in order to unite the two day-to-day college support operational teams into one cohesive unit. This new partnership allows for better resource management, cross-training, and improved services to the classrooms and lecture halls in order to improve both student and faculty success in the classrooms.

Projects

1. College of Social and Behavioral Sciences
 - a. Social Work SB365
 - i. Project: This project is for improvements in the classroom with new projector and instructor station. Completed Summer 2017
 - ii. Impact: 500 Social Work students
 - b. Social Work Dropbox Cleanup
 - i. Project: Cleanup Dropbox Business for the School of Social Work to prep for a Google Drive transition proposal
 - ii. Impact: Faculty and staff; 20 users

- c. Social Work PC Upgrades
 - i. Project: New PC purchase upgrade for staff and faculty.
 - ii. Impact: CSBS Faculty/staff
 - d. Social Work SB Fourth Floor Lab upgrades
 - i. Project: Migrate Social Work's Lab to Windows 10 and upgrade other lab images
 - ii. Impact: Faculty and students; 130+ users
 - e. Social Work Titanium Project
 - i. Project: In a partnership between the Department of Social Work, CSUSB ITS and the Colton Unified School District, create and implement a counseling intake system for use at the Colton Unified School District to be used by CSUSB student researchers and Colton counselors.
 - ii. Impact: Faculty and students of CSBS Social Work; Colton USD Community.
2. College of Arts and Letters
- a. Dean's Office Share
 - i. Project: File share for CAL Dean's office
 - ii. Impact: CAL Music Staff; 30 users
 - b. Coyote Radio/Advertisement File Share
 - i. Project: File share for CAL Coyote Advertisement (2TB)
 - ii. Impact: CAL Faculty and staff; 30 users
 - c. Coyote Radio/Advertisement
 - i. Project: Repurpose PCs and printer upgrades for staff and faculty.
 - ii. Impact: CAL Faculty/staff; 30+ users
3. Library
- a. Jamf Deployment
 - i. Project: Deployment of Jamf for Managed Devices in the Library
 - ii. Impact: Library Staff; 30 users
4. Technology Support Center
- a. TSC Lab Deployment
 - i. Project: Deployment of ArcGIS to TSC lab
 - ii. Impact: Students; 100 users

- b. Call Center Support
 - i. Project: Cover phones for the Technology Support Center
 - ii. Impact: Students, Faculty, Staff; Campus-wide
- 5. University Wide
 - a. Semi-annual Mass Purchase
 - i. Project: Leverage economies of scale to reduce the cost of new computers
 - ii. Impact: Saved the Campus over \$15,000 on the purchase of 172 computers in 2018. In 2017 the campus saved over \$21,000.
 - b. All Techs Meeting
 - i. Project: Bi-Annual meeting of CSUSB techs to collaborate, learn, coordinate and plan. Also provides Professional Development opportunities.
 - ii. Impact: Over 70 Technical Staff; Campus-wide

Standardization

The Standard Operating Procedures (SOP) Group is tasked with the identification of best practices and procedures in technical areas campus-wide. The SOP group have determined the following Campus Standards during the 2017-18 calendar year:

1. Semiannual computer purchase
2. Technical Communication Tool: Slack
3. Server naming convention
4. Classroom software & hardware standards
5. Zoom capable room standards in each college
6. Campus-wide Lab Standards

All Standard Operating Procedures can be found at the SOP website: <https://www.csusb.edu/its/sop/standard-operating-procedures>

Classroom Support

In 2017-18, the Classroom Support team provided technical support, maintenance and upgrade of technology in classrooms in all five colleges.

- Over \$200,000 in Lottery Funds were awarded to CSUSB for Classroom Support upgrades and new implementations.
- Over 40 new Projectors and Screens were purchased for classroom replacements.

- Classrooms in the College of Social and Behavioral Sciences and the College of Education were enhanced with new technology during Spring break.
- The team provided A/V consultation for the design of the new Dining and Housing Complex.
- New cabling, classroom countertops and other equipment were purchased for upgrades in the Colleges as well.

Assessment

- We assisted with over 200 incident and request tickets
- We partnered with the Colton Unified School District on a Counseling Intake program for high school students.
- Classroom Support assisted several colleges with upgrades and improvements to their classrooms
- We procured over 200 computers and monitors in a campus-wide bulk purchase from Dell Corporation that produced a substantial net savings to the campus.
- The SOP group approved the standardization of Lab rules, the Slack communication tool for technicians and the implementation of Zoom capable rooms.

Looking Ahead

The DTS department is constantly thinking of ways that we can improve our services to the campus community through improved service processes, enhanced software and hardware, and other tools.

Enterprise and Cloud Services (ECS)

Highlights

Research Computing

The ECS team successfully established a data transfer node (DTN) for CSUSB, which is part of the Pacific Research Platform's (PRP) kubernetes cluster (K8s). This is a major milestone for CSUSB to foster faculty-led research and fostering faculty success in direct support of the campus strategic plan. Many services such as bandwidth monitoring can conveniently run as Docker images. The high bandwidth transfer node contributes about half TB of SSD and 3TB local storage dedicated to faculty to store their work. It also provides access to over 300 TB of redundant, distributed storage that is part of the Globus services.

Cloud Migration

CSUSB was the pioneer campus within the CSU to complete the Gartner Cloud Migration Readiness Assessment. Through the exercise, CSUSB served as the subject matter expert and the leader in the CSU to re-evaluate systems that the campus has already migrated to the cloud, as well as to evaluate other systems to assess the feasibility to safeguard, defer, rehost, refactor, or retire.

Virtual Infrastructure Upgrade

Hardware Maintenance, Upgrade and Troubleshooting:

- Major maintenance for Storage Area Network to prepare for migration to Network Attached Storage.
- Installation of 820 Controller
- SAN Expansion for VEEAM Backup
- Installation of two new Physical Servers for ACBI
- Further development of the DEV VMware rack adding systems to clusters and establishing storage common to the VMware vSphere infrastructure.

Campus Colleges Server Co-location and Virtualization

Colleges across campus are being relocated into the university server room. College of Art and Letters is one of the first colleges that is fully migrated and running their operations from the campus data center. A majority of the College of Social and Behavioral Sciences computing resources are also housed in the campus data center and the campus virtual environment. School of Computer Science and Engineering is also co-located in the campus data center.

Enterprise Application Migrations and Upgrades

- Migrated Library to Alma cloud-based service.
- Migrated Housing and Residential Education from CBORD Odyssey to StarRez cloud-based system.
- Migrated Student Health Center from legacy system Pro-Pharm for medication dispensing.
- Migrated Facilities Services from iServiceDesk to WebTMA maintenance management system.
- Migrated Facilities Services from legacy system to SimpleK key management system.
- Launched new campus weather station website.

Assessment

Exam and SOTE Scanning

YEAR -->	2013-14	2014-15	2015-16	2016-17	2017-18
July	-	2,351	2,336	1,721	1,156
August	-	1,181	1,353	1,324	1,394
September	-	991	1,117	600	741
October	-	9,600	9,036	9,407	9,742
November	-	9,094	9,081	8,642	8,037
December	-	10,397	11,375	11,154	8,830
January	-	1,356	574	2,216	2,846
February	300	12,307	14,182	10,951	11,511
March	-	15,715	14,297	14,449	9,300
April	2,196	5,024	3,617	4,456	4,068
May	9,882	11,694	10,904	10,995	9,950
June	10,124	12,115	9,067	7,738	9,278

Total Sheets scanned	22,502	91,825	86,939	83,653	76,853
Total tickets opened	312	1,314	1,263	956	1050

Looking Ahead

LogRhythm Security and Operation Analytics

In collaboration with ECS, TNS, and ISET, CSUSB is the alpha pilot campus for the CSU to explore LogRhythm as its security and operation analytics platform. The goal of this project is to transition the various different analytic tools into a more seamless platform. Currently CSUSB utilizes Splunk and ELK to perform various analytics and alerts of system anomalies.

Storage Infrastructure Upgrade

With the significant growth of campus security cameras and media-rich storage needs, ECS has upgraded the current Storage Area Network to 1 petabyte (PB). In addition, the campus has acquired a new 300 TB Network Attached Storage and will begin migrating many of the media-heavy storage that does not require high I/O onto the new NAS. This will allow CSUSB to reserve the premium SAN storage for production workload.

Continuation of Cloud Migration

Through the Gartner Cloud Migration Readiness Framework, CSUSB identified additional systems and applications that are cloud-ready. In the upcoming year, ECS will be migrating the campus listserv application Mailman into Google Groups. Campus department file share is another possible candidate that the framework has identified as cloud-ready. ECS has evaluated various options including Google Team Drive, Microsoft Teams, Sharepoint Online, as well as Microsoft Azure File Sync.

Information Security and Emerging Technologies (ISET)

Highlights

Information Security Governance and Compliance

The ISET Subcommittee started the 2017-2018 with a new Co-Chair, Dr. Joon Son from the department of Information and Decision Sciences. The subcommittee successfully reviewed and updated several important information security standard. This subcommittee met periodically through the year and reviewed the following campus policies and standards:

- CSUSB Information Retention Schedule
- CSUSB Information Retention Management Standards
- CSUSB User Responsibility for Information Assets Standard
- CSUSB Information Authorities and Custodians
- CSUSB Network Security Management Standard
- Mobile Device Policy
- Wireless Networks Policy
- Information Technology Accessibility Policy
- Campus Email Standard

Enterprise Applications - Single Sign On

The campus continue to expand its cloud services in support of students and faculty academic activities which are been incorporated into the campus portal and single-sign-on for access. This year the following applications were integrated on the campus portal:

New MyCoyote Portal

Cherwell

WebTMA

EVERFI-AlcoholEdu

Interfolio

Kurzwell

SkyFactor

StarRez

RecSport

GradLeaders

Media-Portal

Library Fee Portal

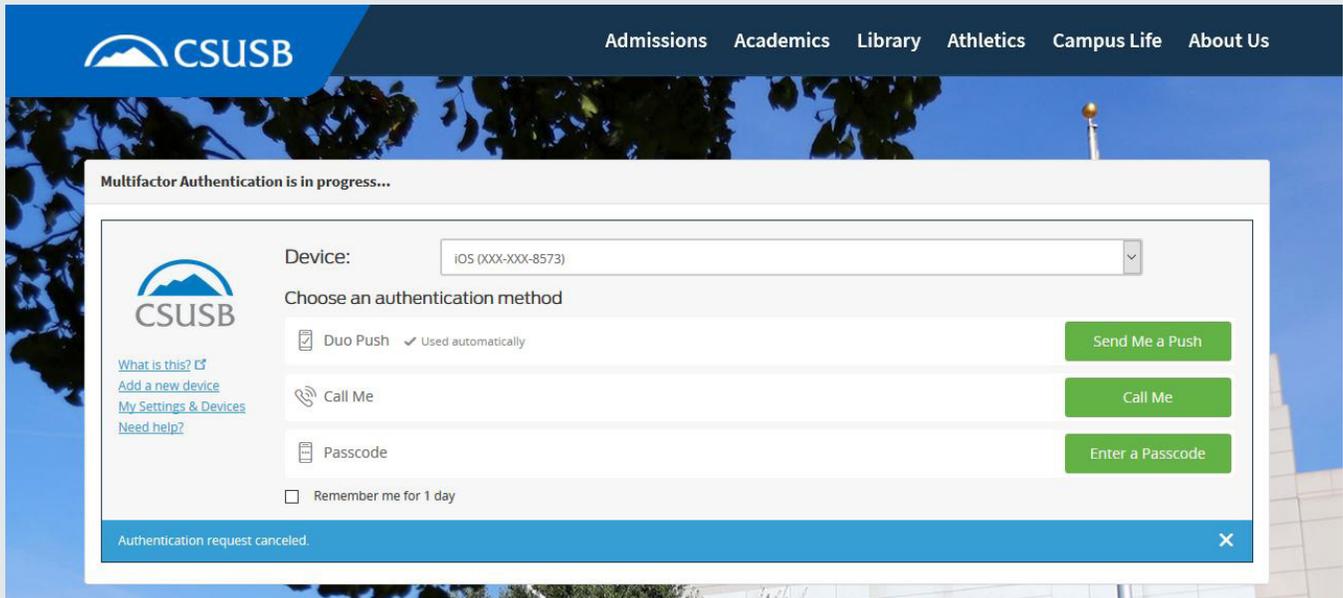
LibProxy

NeoGov

Pacific Research Platform

Multi-Factor Authentication

In an effort to reduce the risk for compromised user accounts to gain access to protected data, two-factor authentication to over 600 faculty and staff was deployed across campus users with access to sensitive data and critical applications. This solution will be expanded to include other areas across the campus during the incoming year.



Emerging Technologies

In close collaboration with other ITS departments and in response to the need for high performance computing and storage to support faculty and students research, ITS successfully deployed a Science-DMZ and initiated his participation in the Pacific Research Platform, an NSF sponsored program led by researchers at CS San Diego and UC Berkeley.

Assessment

Online Computerized Information Access (CIA) Form

This year in an effort to increase efficiency and improve customer service a major enhancement was made to the Computerized Information Access (CIA) Request process which resulted in a significant reduction on the number of incorrect or unnecessary request for access and on the time reduction for granting access to end users. Another enhancement to facilitate the authorization process is currently under development.

Phishing Program

This year quarterly “phishing” exercises were conducted as preventive measures for increasing the awareness an of campus members on the new emerging email “phishing” attacks. The exercises provide just-in-time instruction and help individuals recognize potential “phishing” emails.

Business Continuity

Business continuity and disaster recovery planning are critical to ensure information services are uninterrupted to campus end users. In close collaboration with the different department ITS, tests of the business continuity and disaster recovery plans for each area were conducted during the Fall-2017. The exercise revealed gaps on the plans which were prioritize and corrected during the academic year.

Looking Ahead

Cloud Security Architecture

In parallel to the cloud migration efforts and in collaboration with ECS and TNS, information security and emerging technologies is defining a cloud security architecture. The cloud security architecture will provide the foundation for the cloud migration of university application implementing the necessary information security controls for the protection of sensitive information and critical resources and ensure compliance with CSU and CSUSB Information Security Policies and Standards.

Governance, Risk and Compliance

The information security and emerging technologies department will be exploring the deployment of a governance, risk and compliance (GRC) tool to facilitate maintaining the inventory and conducting information security risk assessment on confidential and critical university information assets. In addition to risk assessments, the tool will be used to conduct the periodic compliance assessment required for access controls to critical systems and applications.

Palm Desert Campus

Highlights

- Design, equip, staff and implementation of a collegiate radio station that is live streamed from the Palm Desert Campus. This was a collaborative effort that was initially funded by VETI grant of 17,000.00
- Neurofeedback clinic
- Expansion of Parking services kiosks at PDC

Assessment

- OLLI class enrollment was up 12%
- 100% utilization of mobile laptop cart
- 98% of campus computers updated to Window 10

Looking Ahead

- iHub collaboration with the City of Palm Desert, Coachella Valley Economic Partnership. This is an incubator that provides programs, services, and incentives to start-up businesses focused on clean technology and renewable energy. One of 16 innovation hubs in California, the Palm Desert iHub offers qualified companies office space, a conference area, consulting, and administrative support to encourage their growth and success.
- CyberSecurity program on campus, that would establish a permanent home for CyberSecurity in the Coachella Valley.
- Crown Castle presence on campus to improve cellular service

Project Management and Assessment Office

Highlights

The Office serves as a primary in a project management capacity or active project team member(s) on major ITS or University projects such as the:

- **Cherwell** Enterprise Service Management System.
- The creation of the **ITS Consulting Services** group provided more opportunities to assist the campus in new software implementation
- The new **StarRez** housing management system,
- **Fusion** the new Rec Sports management system,
- **Interfolio** for Faculty Retention, Tenure and Promotion (RTP)
- **Mobileserve**, the system for managing volunteer service hours.
- **PageUp**, the new Centralized Human Resources
- **ALMA**, Unified Library Management System (ULMS)
- **Handshake**, Student employment system
- **Web-TMA**, New Facilities Services, Work order Management System
- **SimpleK**, New key management system for the campus

Special Projects included:

- Developing an internal solution for ASI to hold their voting online
- The coordination of the technical components of the Emergency Alert Ecosystem which include Alertus, BlackBoard Connect, Informacast, and the implementation of the new selected mobile emergency alert system LiveSafe.
- LinkedIn-Learning/Lynda.com training system,
- The PMA office has assisted with a major Chancellor's Office initiative for the Centralization of Human Resources (CHRS). In addition, the PMA office enlisted the expertise of Rick Conway to assist with many campus wide construction projects that included technical guidance and network specialization.

The PMA office provides assistance with the following service offerings:

- Liaison to the leadership cabinet of the Admin-Finance division
- IT Governance for CSUSB
- Technical Advisory Group (TAG)
- Standard Operating Procedures group (SOP)
- Portfolium, Zoom, REACH digital signage system, Wrike project management system
- Assist with the VETI program, providing training and consultation as needed.

Assessment

This year the Project Management and Assessment office worked closely with all of the departments within Information Technology Services (ITS), on several critical projects, specifically the department tracked the following:

- 36, the number of projects completed within the Division between July 2017 - June 2018
- 70, the number of current open projects within the ITS Division

Looking Ahead

This upcoming year, we are looking to mature the Project Management and Assessment service offering we would like to develop the following:

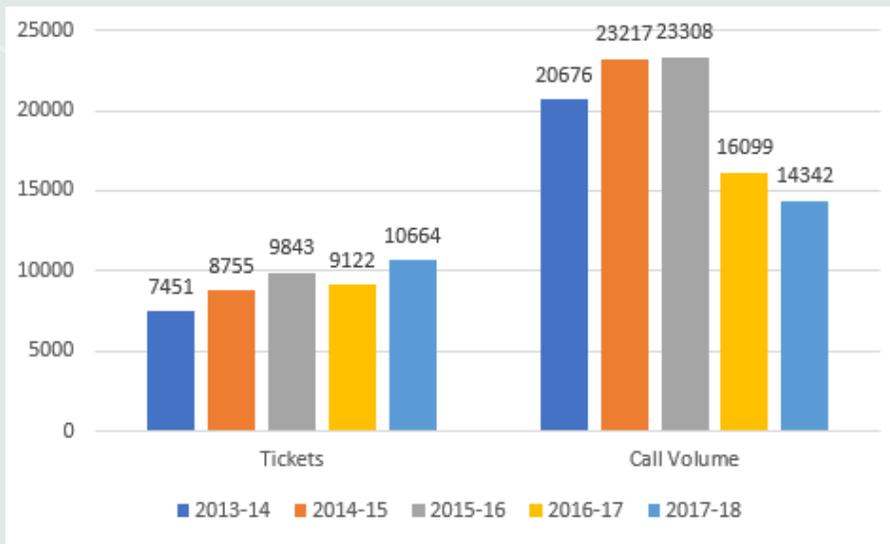
- The addition of the role of the Project Management Liaison from each ITS department. The liaison will work closely with the department manager on project management and will work closely with the PMA office to establish clear lines of communication with the office and support the individual teams in project management.
- Continue to strengthen the project management in the division by offering training to others within the division.
- Lead the implementation of the business process improvement team for the campus, utilizing workflow tools and subject matter experts.
- Continue to tighten the tracking of CSUSB software and system offerings as well as Computer Assets for the University.

Technology Support Center (TSC)

Highlights

Technology Support

The Technology Support Call Center handled over 14,000 calls from June 1, 2017 - May 31, 2018. The busiest weeks were the first weeks of the both the Fall 2017 and Winter 2018 quarters, where we answered over 600 calls each week.



Side-by-side annual comparison of Tickets and Phone Calls to the Support Center

Kayako Ticketing System

From June 2017 through May 2018, over 10,600 tickets were resolved in Kayako. Below is a department representation of these tickets, sorted by number of tickets resolved:

Average Customer Satisfaction Rating:

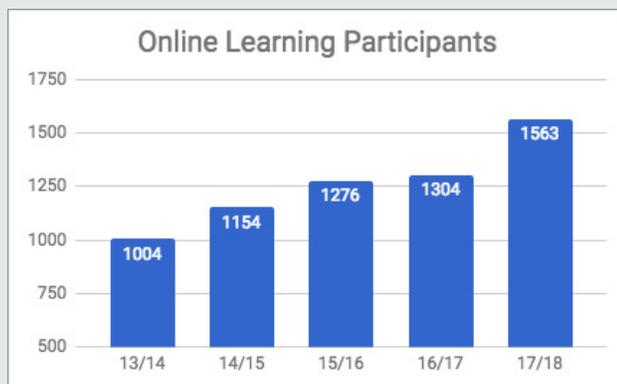
- **4.87 (Out of 5)**

Department	Tickets Resolved
Technology Support Center	5047
Enterprise & Cloud Services	2116
Web Services	1647
Academic Technology & Innovation	881
ITS Training Services	392
Information Security and Emerging Technology	234
Distributed Technology Services	197
Administrative Computing & Business Intelligence	90
Telecommunication & Network Services	42
Palm Desert Technology Services	18

Training Services

ITS Training Services provides training, documentation and support for PeopleSoft (PS) HCM/SA (Human Capital Management & Student Administration), CFS/DW (Consolidated Finance System & Data Warehouse) and a variety of software topics to campus constituents. We also provide other technical training such as Zoom, New Employee Technical Orientation (NETO) for new employees, Communication in the Workplace: Active Awareness, Financial Aid, Qualtrics, and many others. These topics are offered through various platforms which include: instructor led, on-demand (Campus custom content, Lynda.com and Skillsoft). Sessions are offered in small group, department specific, one on one and walk-in services. Special requested training topics can be scheduled. From May 1, 2017 to April 30, 2018 we have served:

- **Instructor Led offered:** 538 sessions, with 1134 attendees
- **One on One sessions offered:** 109, with 164 attendees
- **Online training requests:** 1563 attendees
- **Walk-in training requests:** 74 attendees
- For a total of **2935 training attendees served** in the past year



Projects

The Technology Support Center continued to provide world-class desktop support and services to over 1,200 staff members across campus. The TSC also completed the following projects during the 2017-2018 fiscal year:

- As always, the TSC participated in SOAR this past summer and created over 3000 new Coyote OneCards.
- Expanded the Alertus Campus wide emergency notification system.
- We assisted with the co-location of the Staff Development Center in the ITS Training Services Office area this past Fall, 2017.
- Working with other ITS departments and campus technicians, we are implementing Asset Management for all computers on campus.
- Working with Facilities Management, we assisted with the implementation of the new HAC control room and new virtual servers.
- We assisted with the installation of 80 new Dell computers in Facilities Management.
- A new campus weather station went into production use in Spring, 2018.
- We established a new Facilities Management Key System online for campus-wide use.
- We assisted with the implementation of the new Facilities Management TMA work order system.
- We expanded the Jamf iOS Management Software tool.
- TSC staff performed a VDI Upgrade for CEL, ITS Training, Health Center, and SBS use.
- Upgraded the OneCard stations in the TSC and PDC to newer hardware and OS.
- The TSC improved the GoPrint system that is used campus-wide. We upgraded 8 of the GoPrint cash value machines around campus and at PDC. We also brought up a new GoPrint area in UH-347.
- From March, 2017 to May, 2018, the PL-1109 lab saw over 51,000 logins, an increase of over 11,000 since The Cave went live providing 24/7 access to computers and other services.

Housing

We refreshed 35 Staff Computers in Housing and assisted in the Housing move to the new Coyote Village early this Summer. We also assisted with the implementation of the new Housing Management system, StarRez.

Looking Ahead

Cherwell Implementation Project

The Information Technology Service Management (ITSM) implementation project is set to have its initial launch of the Cherwell Service Management platform on August 1st, 2018. This implementation is set to replace the existing ITSM tool, Kayako, and will provide an enhanced toolset for ITS to be able to utilize to serve the campus community. Future feature and scope implementation rollouts include:

- Knowledge Centered Services (KCS) implementation
- Launch of a self-service support portal
- Rollout of ITSM tool division wide
- Expansion of the Cherwell Service Management platform to other divisions, creating a true **Enterprise Service Management (ESM)** platform

This project will unify the IT ticketing systems across Campus, standardizing the level and quality of support we provide the campus community and allow better collaboration between the central ITS team and the College-based IT teams in supporting our students, faculty and staff on evenings and weekends. The goal is to use this project as the basis for an Enterprise Service Management (ESM) initiative that will unify and streamline work orders and service requests from all service units within the Campus.

INK Printer Kiosk Implementation

Before the Fall Quarter starts, we are planning to implement 4 self service printing kiosks by INK. These kiosks will be located in the PL-1109 lab, Pfau Library study area, Santos Manuel Student Union main lobby, and the PDC Health Sciences building. Students will be able to print documents and photos from a variety of sources using INK's intuitive self-service kiosk.

Assessment

- The Technology Support Center processed over 10,600 support tickets this past year.
- We also handled over 14,300 calls in our Call Center.
- The TSC was involved in numerous projects campus-wide in order to improve campus business processes and to facilitate student, faculty, and staff success.
- Almost 3,000 campus community members were trained by the ITS Training Office this year.
- We created over 3,000 new Coyote OneCards for incoming students, faculty, and staff.

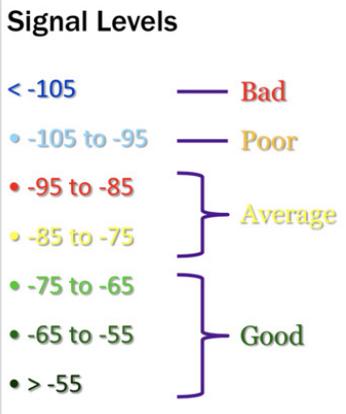
Telecommunication and Network Services (TNS)

Highlights

Cellular Coverage Expansion

As part of the ITS Strategic Plan to enhance campus cellular coverage, TNS completed several major projects to enhance coverage for the major carriers. In 2016, only two carriers have cell sites on the San Bernardino Campus (Sprint, AT&T). As of 2018, we added a third carrier, T-Mobile, as well as added a new 1900 Mhz spectrum for AT&T. Sprint’s cell site has also be enhanced with additional antennas. Negotiation is in progress for Verizon to install a new cell site on the San Bernardino Campus, as well as in the Palm Desert Campus.

Current Results				Results from 4/25/16			
		Main				Main	
		Core	Outer			Core	Outer
Verizon	700	Average/Poor	Average	Verizon	700	Average/Poor	Average
	2100	Poor/Bad	Average	Verizon	2100	Poor/Bad	Average
AT&T	700	Good	Good	AT&T	700	Good	Good
	1900	Good/Average	Average/Poor	AT&T	1900	Bad	Bad
T-Mobile	2100	Good	Good/Average	T-Mobile	2100	Poor/Bad	Good/Average
Sprint	1900	Good	Good/Average	Sprint	1900	Good/Average	Good/Average



Educational Broadband Services

The management of the campus Educational Broadband Services (EBS) was moved under TNS in September 2017. We currently manage seven FCC licenses in San Bernardino and Riverside counties. Through partnership with Yucaipa Calimesa Joint Unified School District and Victor Valley College, CSUSB provides limited cellular broadband coverage to these entities as part of the campus’ strategic goals of community engagement.

Infrastructure Expansion

TNS continues to enhance the campus fiber and copper infrastructure to support the campus' continuous growth. As such, we completed the installation of a new fiber connectivity between Pfau Library and Facilities Management Building. Both buildings serve as the main campus distribution point for internet connectivity.

Additionally, 144 strands of fiber were installed between Pfau Library, Social and Behavioral Sciences, and Jack Brown Hall as part of the cellular expansion project. Enhancement were made to Temporary Offices fiber connectivity; new copper infrastructure was extended to the East Parking Structure to support the campus emergency phones.

Capital Projects

TNS played a major role in several campus capital projects including the design and installation of nearly 500 network devices in the new Coyote Village. Extension of campus network to the new Temporary Classrooms, SCE substation, and enhanced connectivity to the Central Plant. We are also actively involved in the network design for the Center for Global Innovation and Student Union Expansion projects.

Telecommunication Systems Enhancements

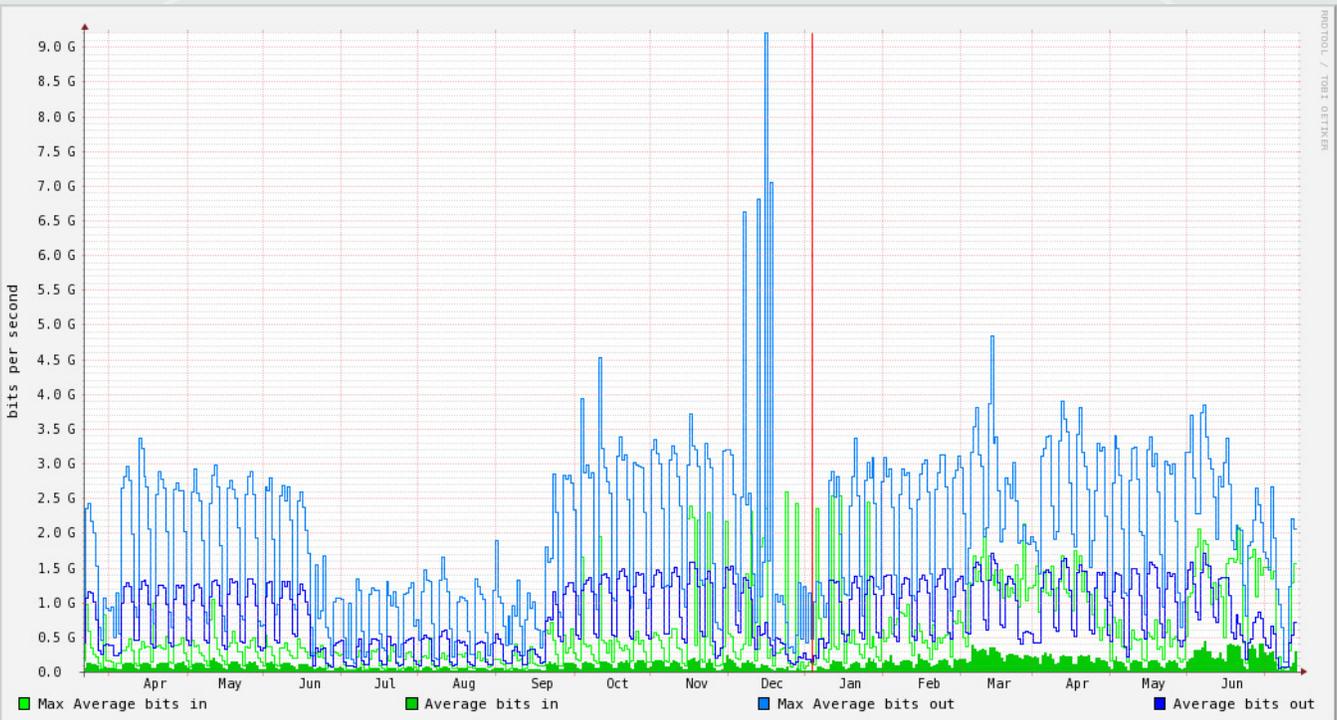
The telecommunication team also successfully completed several projects including:

- Voice gateway upgrade and re-architecture of campus analog telecommunication system
- Diversification of upstream local exchange (Frontier) circuits
- Enhancement to the campus emergency phones and Area of Refuge phones

Assessment

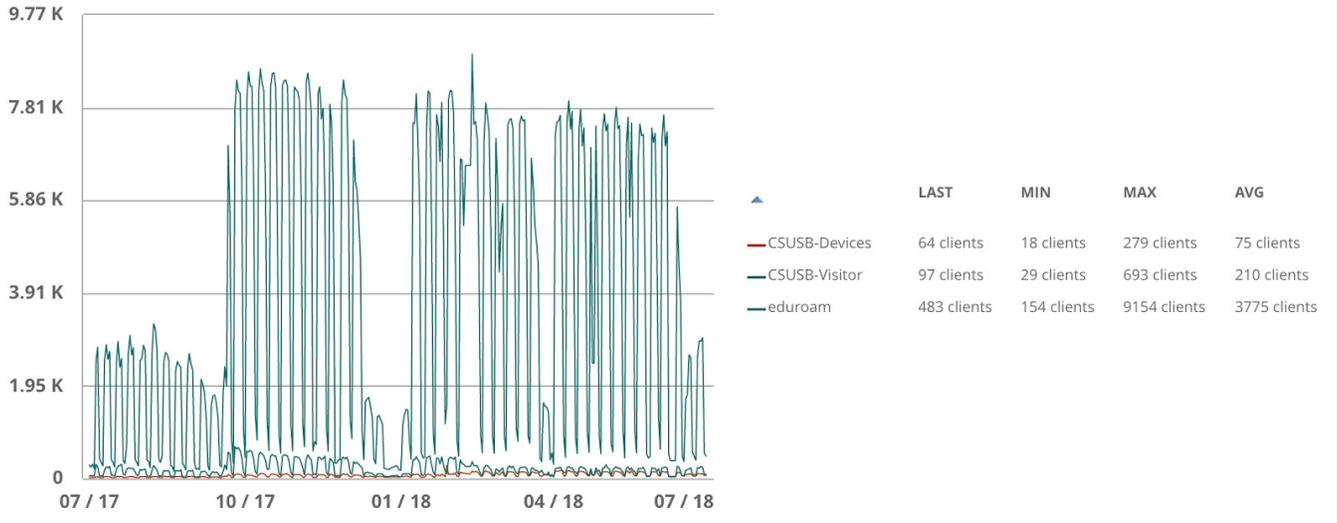
Network Services

On the CSUSB wired network, TNS has increased bandwidth on the campus core network to provide the first 10Gbps intra-campus connection. With the newly established Science DMZ network, CSUSB was able to sustain data transfer rate of over 9Gbps for high-throughput research computing. During the academic year, the campus average peak usage at around 3.5Gbps.



Growth in wireless usage continues with approximately 10% growth in the maximum number of clients connected simultaneously. In the 2017-18 year, nearly 2.1 petabytes (PB) of data passed through the campus wireless network. As part of the eduroam network, CSUSB also joined in the global Anyroam network to provide users seamless wireless access across the globe. In 2018 CSUSB had:

- eduroam visitors from 111 locations, including 15 countries
- our users visited 292 locations, including 21 countries



Client Services

- Campus Cellular Accounts – 270
- Campus Phone Lines – 3554
- Outgoing Calls – 443,969
- Work orders – 1,757 (6/1/17 – 5/30/18 closed)

Looking Ahead

100Gbps CENIC Upgrade and Core Network Upgrade

Over the next academic year, CSUSB will complete an upgrade to increase the campus CENIC connectivity to 100Gbps. This will significantly increase the campus' ability to connect to research networks such as the Pacific Research Platform and San Diego Supercomputing Center. TNS will upgrade campus firewalls and will continue to upgrade the campus core network to provide 10Gbps connectivity to many buildings on the campus core/backbone network.

Campus Directory

In partnership with Web Services, Administrative Computing & Business Intelligence, Human Resources, Academic Personnel, and UEC, we will launch the new campus directory in the Summer of 2018. The new campus directory will leverage data from PeopleSoft to reduce manual updates and provide access to more accurate directory information to the campus community and affiliates.

Telecommunication Billing

As proposed to the IT Governance sub-committee and the executive committee in Spring 2018, TNS will re-evaluate the campus telecommunication billing, which is currently billed by usage, and transition to a per-line flat rate plan.

Web Services

Highlights

Web Services migrated and built 78 websites this year. The migration to Drupal is 90% complete. We trained 130 individuals to be content editors in Drupal this year, bringing the total number of editors to 400. We assisted in the development and launch of the new myCoyote portal, and spent much of the year working on the new campus directory, scheduled to launch in mid-August.

Assessment

- 65 websites were migrated to Drupal CMS
- 13 new websites were built in Drupal
- 130 content editors trained in Drupal
- 3 million unique pageviews occurred on our campus home page
- 2 million total searches performed
- 1647 tickets resolved
- Top 5 countries accessing our site's home page after US hits are: 1. India, 2. South Korea, 3. China, 4. Canada, 5. Germany

Looking Ahead

Web Services anticipates the completion of the Drupal migration project this upcoming year, with an expected completion date of Fall 2018. Beginning Fall 2018 we will offer web hosting to faculty. Web Services will become the centralized and sole source for mobile app development at CSUSB, beginning with the launch of a new app called myCoyote, which will provide the same functionality as the desktop portal. Also anticipated is the migration of the Academic/ University Calendar to Drupal which will allow for easier access and dissemination for all audiences and service groups, allowing them to pull from a central location the relevant data for each group. A new look to the public facing Course Schedule will be examined to achieve greater accessibility, usability, and portability for students.

Management Action Plans

Management Action Plans serve as the Project Charters for the ITS Division.

1. CCleaner Registry Cleaner Software
2. Cherwell Enterprise Service Management
3. Enterprise Secure File Transfer Service needed for Cloud Services
4. Horizon VDI License Upgrade
5. ITS Consulting Services
6. People Mobile Application Software
7. Portal/Mobile Application Software
8. Recreational Sports and Wellness Fusion Project
9. 24/7 Study Area Refresh Proposal

Management Action Plan

Review and recommendation

CCleaner Registry Cleaner Software

Introduction

The purpose of this venture is to address a serious licensing issue on campus with a campus-wide purchase of the CCleaner Windows registry cleaning software product for faculty and staff machines. Late in 2017, a security vulnerability was discovered in the installer that is used for the CCleaner registry software. The software was fine, but a problem existed within the Windows installer. Meaning that if you had the vulnerable version, then you needed to reinstall it with a newer version. This led to the TSC running a scan on all computers in the campus domain to look for computers with CCleaner on it. Almost 500 were discovered, with most all of them using the “free/personal” version. This is not acceptable for campus use. If it is used on campus, the software needs to be purchased.

The free version is so widely available on most major software download sites that most people don't think twice about installing it on university computers. It is a valuable desktop support tool that is in use in both the academic and administrative sides of the campus.

Challenge(s)

- Almost 500 campus employees are using a non-licensed version of CCleaner.
- Windows registries become corrupted and need to be cleaned from time to time.

Alternatives

Look for a public domain Windows registry cleaner. However, they do not perform as well as CCleaner.

Impact(s) if we do nothing:

- The campus can be both fined and sued for licensing issues costing in the hundreds of thousands of dollars.



Recommendation

ITS is recommending that the campus purchase 500 licenses of CCleaner to fall into licensing compliance and to provide our faculty and staff with improved operating systems.

Budget Considerations

The vendor, Piriform, is offering us a 25% discount from their usual license cost. The total for 501 licenses is \$4,884.75.

- This will cost more than \$10,000 (multiple-bid solicitation required)
- This will cost more than \$50,000 (Purchasing approval required)
- This will cost more than \$500,000 (Procurement Audit)
- This is considered a High-Risk (Liability) Project to CSUSB or the CSU

Assessment Plan and Key Performance Indicators (KPI)

Provide a minimum of two (2) key performance indicators (KPI) will best indicate project success:

1. We will be addressing a serious licensing issue that will be demonstrated immediately upon implementation.
2. We will see improved performance on faculty and staff computers after installation of the new software.

Estimated Timeline

Project Start Date: March 1, 2018

Project Completion Date: March 31, 2018

Departmental Resource Allocation

-ACBI -ATI -DDTS -ECS/TSC -ISET -TNS -PMO -Web

Approval

This project will require IT Governance review during the _____ monthly meeting.

Jim Olinger January 30, 2018

Submitting MPP Submittal Date

Approval Date Approving MPP



Cherwell Enterprise Service Management (ESM)

Background

Historically, different service areas on campus use a variety of tools if any to manage their service requests. This creates an inconsistency in how service requests are managed across campus. Campus Information Technology (IT) groups are not the only users of a potential enterprise solution for service management (ESM).

Details

A team consisting of every department in ITS and academic college techs have worked together to evaluate a campus wide service fulfillment solution (ESM) Enterprise Service Management of an ITSM (Integrated Technology Service Management) System. The goal will be to identify one service fulfillment system for the campus eventually. Taking a comprehensive look at services such as knowledge base, service catalog, workflow, and incident and service requests are all involved in the selection of an ESM tool. The team is also looking at features such as integrating Change Management, Resource Management, and Project Management into the same system. Various ITS departments and techs across the university have been leading the charge on this important project over the past year.

Challenges(s)

- Any new tool requires training and a learning curve.
- Standardization on a new tool and framework.
- Dedicated resources to implement and and maintain said system.
- Implementing the new tool where there has been no precedent.

Alternatives

- Other products offer similar functions: TeamDynamix, ServiceNow, BMC, Kayako, Salesforce, ConnectWise, FreshDesk

Impact(s) if we do nothing

We lose the potential to standardize on a product that can service the entire campus community. We will continue to use a fragmented service delivery system.

Recommended Action(s)

1. Purchase the Cherwell ESM solution and phase implementation on campus.
2. Coordinate a campus wide effort to utilize the new system.
3. Establish a governance group for Service Management

4. Train Subject Matter Experts (SMEs) on ITIL (Information Technology Integrated Library) and KCS (Knowledge Centered Service) Frameworks

Rationale

Cherwell is a leader in the ITSM/ESM solutions group according to leading industry analysis. Cherwell offers an out of the box solution that is highly customizable and has all the features we need at CSUSB. Cherwell's licensing model based on concurrent users is more favorable than the pricing models for most other solutions. Cherwell's service team has been highly interactive in our various proofs of concept. The team of techs narrowed down the list to Cherwell by order of a 43 piece evaluation rubric with feedback from various techs all across campus.

Budget Considerations

Initial quote was \$65,000 per year for 3 years for 40 concurrent users. There is an approximate \$10,000 first year fee for implementation which includes training and professional services.

ITS has negotiated the annual price down to approximately \$50,000 per year.

Other considerations:

- In order to fully utilize KCS and advanced knowledgebase functionality the campus should invest in training that costs approximately \$20,000 per year for Knowledge Centered Service (KCS).

Recommended Timelines

Phase I - June 2016 - Primary Evaluation of tools and services

Phase II - April 2017 - Focus on top three options

Phase III - Winter 2018 - Implement Selected Vendor for ITS and College Techs

Phase IV - Fall 2018- Rollout ESM to Entire campus community

Initial demos: May 2017

Final Demos: July/August 2017

Proof of Concept: October 2017

Primary Stakeholder Evaluation:

- Academic Technology - Adrian Enciso, Micah Shiessel
- CAL Tech - Ken Han
- CBPA Tech - Ian Jacobs
- COE Tech - Think Ly
- CNS - Birdy Wang
- CSBS Tech - Dustin Gray
- Enterprise and Cloud Services - Gerardo Garcia-Sotelo
- Information Security - Russell Jackson
- Tech Support Center - Roger Robles, Brandon Sierra, Jeff Whitman

- Telecom and Network Services - Heather Hopkins , Lonelle Minesinger
- Web Team - Joel Fite
- IT Leadership: Jim O'linger, Felix Zuniga, David Nimri

Specialized Review - November 2017

- David Gee - Director of Procurement Services
- M. Monir Ahmed - AVP Finance & Administrative Service

Estimated Project Start: Winter Quarter 2018 - January

Keywords: ITSM, ESM, Cherwell, Kayako. Service Management

Management Action Plan

Review and recommendation

Enterprise Secure File Transfer Service needed for Cloud Services

Introduction

In order to provide proper support to administrative applications, campus data is exchanged constantly between Cloud hosted applications. These exchanges are conducted via a secure file server that is maintained by the campus. At this time, this service depends on one staff member for its configuration and maintenance. In order to meet the operational needs of the campus, we are proposing to upgrade the current service with an enterprise solution that will provide delegated administration, facilitate configuration for the different applications and improved notification and alerting for both Cloud and Server applications.

Challenge(s)

The current service CLEO – VLTrader does not handle Amazon S3 Connector. We are having to use a vendor supplied tool to manually move files to and from this cloud hosted service.

Alternatives

Replace the CLEO - VLTrader with a more robust enterprise solution that provides additional functionality and alleviate the manual process of moving files to and from cloud hosted service.

Impact(s) if we do nothing:

For applications that use Amazon S3 Connector will have to be handled outside of the enterprise system we have in place for other file transfers. This will have a significant impact to all students, faculty and staff.

Recommendation

The technical staff evaluated a solution to this problem and determined that **Cleo - Harmony** provided the additional functionality and the effort we had already made in FTP'ing files will continue in this upgraded platform plus we will gain additional functionality.

The main functionality differences that Harmony offers:

- Amazon S3 connector
- 18+ Protocols including AS2, FTP, FTPs, SSH FTP, HTTP, HTTPs, SMTP, SMTPs, SOAP, REST, etc.
- Branded Web portal that allows external users to send and pick up files
- Hadoop connector
- Enhanced Dashboard

Budget Considerations

This vendor provides two possible solution - a product license per site and a subscription service. Based on the number of exchange sites the cost effective solution is the subscription solution which provides for an unlimited number of sites.

Current cost is about \$12,000 for CLEO- VLTrader a year. The 1st year cost was \$14,000 which included 2,000 in training and setup. **The cost of the HARMONY subscription is \$17,937.50 for the first year which includes \$2,400 for Training, and \$19,500 for years 2 and 3. This will increase our annual subscription about \$7,500 more a year.**

Assessment Plan and Key Performance Indicators (KPI)

Provide a minimum of two(2) key performance indicators (KPI) will best indicate project success:

1. Improve reporting and alerting when data exchange takes places or fails
2. Improve configuration of services reducing the time to enable data exchange requests.

Estimated Timeline

Project Start Date: May 1, 2018

Project Completion Date: June 30, 2018

Departmental Resource Allocation

-ACBI -ATI -DDTS -ECS -ISET -TNS -PMO -Web

Approval

This project will require IT Governance review during the _____ monthly meeting.

Lenora Rodgers _____ February 20,2018

Submitting MPP _____ Submittal Date

Approving MPP _____ Approval Date



Horizon VDI License upgrade For Review and Recommendation

Introduction

The current CSUSB ITS Horizon VDI environment hosts 178 virtual desktops, servicing 12 Departments in 3 Divisions. The two underlying hosts are Dell R730 hosts operating in a ESXi 6.5 cluster.

Details

At present, the Horizon platform is licensed for the Advanced version of the product. This has allowed ITS to offer session based desktops, RDS hosted Application streaming, vGPU based VMs and application packaging.

As the environment visibility among the campus tech community has grown, so has the requests for better capabilities and end-user experience. We have several departmental requests, which would require an upgrade to the ITS Horizon license level. ECS proposes to upgrade the license level in order to continue providing best in class services and support to our campus community.

Challenges(s)

1. The Horizon adoption has increased across various departments on campus, ranging from generic student labs to user groups housing and processing Level 1 data (Health Center, Graduate Advising, OnBase).
 - a. As the complexity and the scope our VDI services expands, the need for stronger security and user session control grows as well. For example, more granular control over client drive access and off-campus printer redirection to enhance security.
 - b. Horizon Enterprise edition offers granular session control by the name of Smart Policies which would allow us meet the above goals.
2. In addition, being able to scale up while reducing our operational costs is a critical objective.
 - a. To this end, we'd like to leverage vRealize Operations manager to gain better insight on platform usage, performance analytics and capacity planning.
 - b. Current logging: Basic real-time metrics only. For example, current sessions, desktop inventory state and current errors. No ability to run historical usage reports.
 - c. vRealize operation manager would provide logging of VDI sessions. Capabilities to monitor the following.
 - i. General Resource-cpu, memory, PCoIP cpu, PCoIP memory
 - ii. Users -active user, count active, agent versions
 - iii. Authentication-authentication failures, SSO authentication status
 - iv. Desktop session-session started, session closed, session reconnect, avg session length in minutes.
 - v. PCoIP server and client-bandwidth-bandwidth utilization, connection quality, packet counts, encoder, decoder, warning, errors.

3. The Horizon environment continues to grow and we expect to host 200-250 total desktops in the short term. Some of the current desktop pools are as follows:
 - a. ITS Training
 - b. Conference Room VDI
 - c. Graduate Advising
 - d. OnBase Training
 - e. Records & Registration
 - f. Student Health Center
 - g. O365 Troubleshooting
 - h. SBS Student Lab
 - i. CEL student Lab
4. We have also been requested to offer Linux VDI services for our student population. In order to provide Linux VDI, we'd need to upgrade the ITS Horizon instance to Enterprise Edition or purchase separate Horizon for Linux licenses.

Alternatives

1. VDI scenarios requiring tighter security controls such as location based printing, client drive redirection or off-campus access will likely require complex VPN controls to a large user base.
2. Continue to operate a growing VDI environment without capacity planning.

Impact(s) if we do nothing

1. The Horizon environment will continue to offer current services to the campus community, but it will be unable to satisfy more advanced requests that continue to be placed by the campus user groups.
2. Additional security controls may need to be put in place for a large user base adding deployment complexity and administrative overhead.
3. Absence of capacity planning and performance analytics may result in sub-optimal use of the underlying infrastructure.

Recommendation

1. Upgrade current Horizon licensing to Enterprise Edition
 - a. Status-quo (remain with Horizon Advance) maintenance cost: \$10,993
 - b. License Upgrade cost: \$16,380
 - c. Leverage campus groups interested in advanced VDI functions to offset upgrade costs:
Computer Science and Engineering - \$3285
 - d. **Total differential cost: \$13,095**

ITS Consulting Services

MAP for Review and Recommendation

Introduction

The current Housing Management System (HMS) Odyssey, which the Department of Housing and Residential Education (DHRE) utilizes to manage student services and DHRE maintenance work requests is out of date. DHRE has identified a cloud and module based service that they would like to purchase and implement. DHRE is requesting that five **StarRez** modules be purchased and implemented by Winter Quarter of 2018.

Details

The ITS PMO office will provide the project management for this project. In phase one of this project there will be five **StarRez** modules that will be purchased and implemented by the beginning of winter quarter 2018. The five modules that will be implemented are:

1. Student portal module
2. StarRez portal module
3. Integration module
4. Room maintenance and work request module
5. Room inventory and room condition module.

Only these five modules will be purchased and implemented in this phase. Also, in this phase of the project it is assumed that these five modules will be purchased from and implemented by StarRez or by one of StarRez' contractors. CSUSB will be responsible for providing secured access to StarRez which will allow them to upload the current data from the Odyssey into the StarRez database. It is also assumed that the current system will remain in place while the new system is brought into development, and then into production.

Challenges(s)

There are several challenges here: 1. Conversion of the existing data in the Odyssey DB and the PeopleSoft DB to the new StarRes DB. 2. Favorable review of security controls and the review of the security assessments. 3. Implementation of a new CASHNet contract for DHRE. 4. The stakeholders would like to see if this service purchase can be sole source justified.

Alternatives

If nothing is done, then the current service (Odyssey HMS) which is out of date will no longer be supported. In this particular case, the DHRE stakeholders have identified this service as the one that they would like purchased and implemented. The stakeholders have utilized this service in the past at other universities with very favorable results.

Impact(s) if we do nothing

If nothing is done then the current service (Odyssey) which is out of date will no longer be supported. The impact on students could be that they are unable to login into the student services portal to request and confirm desired services and features.

Recommendation

The recommendation is to move forward with the purchase and implementation of this service if all security assessments and controls are met.

Budget Considerations

- This will cost more than \$10,000 (multiple-bid solicitation required)
- This will cost more than \$50,000 (Purchasing approval required)
- This will cost more than \$500,000 (Procurement Audit)
- This is considered a High-Risk (Liability) Project to CSUSB or the CSU

The customer is in the process of obtaining a price quote based on a 1500 pillow count. The estimated cost is \$10,000 per module. With the total cost estimated at \$70,000.

KPIs

Provide a minimum of two (2) key performance indicators (KPI) will best indicate project success:

1. KPI: DHRE Staff Satisfaction with the implementation process by means of a survey
2. KPI: DHRE students satisfaction with the new services self-help portal measured by means of a survey

Estimated Timeline

Project Start Date: November 7, 2017

Project Completion Date: End of Winter quarter 2018

Departmental Resource Allocation

ACBI ATI TSC ECS ISET TNS PMA Web

Approval

This project will require IT Governance review during the _____ monthly meeting.

Submitting MPP

Submittal Date

Approving MPP

Approval Date



Management Action Plan

Review and recommendation

PeopleMobile Application Software

Introduction

Currently our students have limited access to their PeopleSoft applications via mobile devices. For our students to succeed, we need to implement an application that will allow our students to check their admission status, add/drop classes, and pay fees via whatever device they have available.

Challenge(s)

The CSUSB Community is demanding more mobile applications to gain access to their PeopleSoft data while they are on the move. Our current mobile application does not allow updates to be made to their PeopleSoft data. Students cannot add/drop from classes, accept Financial Aid Awards, and many other tasks that students want to do via their mobile devices.

- Provide update access to data in PeopleSoft
- Minimize effort to develop and maintain the PeopleSoft mobile applications
- Select an option that is responsive to the mobile devices and many other CSU's are already using the solution.

Alternatives

Continue to offer only views of the student's PeopleSoft data but no option to update or interact with their PeopleSoft data from admissions, registration, to graduation.

Impact(s) if we do nothing:

Our students will only have views for displaying PeopleSoft data like they are doing now. No option to update or interact with their PeopleSoft data from admissions, registration, to graduation.



Recommendation

The technical staff evaluated several solutions and reached out to other CSU's and determined that GreyHeller's PeopleMobile® solution for PeopleSoft, provided the best solution that gives us complete flexibility and control while minimizing effort and operational risk.

PeopleMobile® Product provides mobile solutions for the following area:

- Enrollment
- Personal Information
- Finances
- Financial Aid
- Academic Records
- Enterprise Portal
- Faculty Self Service
- Advisor Self Service

GreyHeller's PeopleMobile® solution for PeopleSoft provide a mobile solution that is robust, scalable, and puts control in the hands of the stakeholders that makes sense for their areas of ownership. **This solution is in use at Northridge, SFSU, Sac State, San Marcos, East Bay, and the Chancellor's Office.**

Budget Considerations

The project will be funded by a combination of one-time funds and the savings from not renewing our current Portal Software agreement. First year cost's is \$120,000 and annual renewal is \$30,000.

- This will cost more than \$10,000 (multiple-bid solicitation required)
- This will cost more than \$50,000 (Purchasing approval required)
- This will cost more than \$500,000 (Procurement Audit)
- This is considered a High-Risk (Liability) Project to CSUSB or the CSU

California State University Negotiated Pricing: Campus Solutions	
List License fee, PeopleMobile for Campus Solutions	\$ 255,720
CSU - San Bernardino discount	<u>(180,720)</u>
Net License, PeopleMobile for Campus Solutions	\$ 75,000
PeopleMobile for Desktop (all GH licensed PeopleSoft pillars)	<u>\$ 15,000</u>
Total Net License, PeopleMobile for Campus Solutions & Desktop	<u>\$ 90,000</u>
Maintenance/Renewal, PeopleMobile for Campus Solutions	\$ 25,000
Maintenance/Renewal, PeopleMobile for Desktop	<u>\$ 5,000</u>
Total Net Annual Maintenance/Renewal, PeopleMobile for Campus Solutions & Desktop	<u>\$ 30,000</u>
Total First Year's License and Maintenance Fees, PeopleMobile for Campus Solutions and Desktop	<u>\$ 120,000</u>

Assessment Plan and Key Performance Indicators (KPI)

Provide a minimum of two (2) key performance indicators (KPI) will best indicate project success:

1. Increase the number of mobile applications
2. Decrease the time and effort to roll out and maintain PeopleSoft mobile applications

Estimated Timeline

Project Start Date: September 1, 2017

Project Completion Date: June 30, 2018

Departmental Resource Allocation

-ACBI -ATI -DDTS -ECS -ISET -TNS -PMO -Web

Approval

This project will require IT Governance review during the _____ September _____ monthly meeting.

Lenora Rodgers July 6, 2017

Submitting MPP Submittal Date

_____ Approving MPP

Approval Date

Management Action Plan

Review and recommendation

Portal/Mobile Application Software

Introduction

In order to provide seamless access to the applications our CSUSB Community needs to get to, we need to rethink the way we are currently providing portal and mobile applications. We need a way to create applications in a timely and efficient matter. The CSUSB Community should be able to go to the portal on whatever device they are using and access the information they need to get to.

Challenge(s)

The CSUSB Community is demanding more mobile applications to gain access to their information while they are on the move. Currently CSUSB has a portal but it is not mobile friendly and has proven to be inadequate. Our home grown mobile application does not provide all the access to information as our current portal does. Why can't we have one tool to access the information whether we are on our phone or computer? We need a tool that has the same look and feel no matter what device we are on.

- Need a platform that will provide access to the information our CSUSB Community needs no matter what device they are on
- Increase productivity of mobile applications
- Provide update access to data in PeopleSoft
- Leverage the work of the Computer Science & Engineering students and allow CSUSB to create mobile applications quickly and more efficiently.
- Need a platform that allows better messaging than what we currently have
- Minimize effort to develop and maintain device friendly applications

Alternatives

Continue to utilize the CSUSB Computer Science and Engineering students with slow production of new applications and enhancements for mobile devices. Continue with our current portal which is not mobile friendly and does not allow some of the new functionality that is available in newer platforms.



Impact(s) if we do nothing:

Continue to utilize the CSUSB Computer Science and Engineering students with slow production of new applications and enhancements. Continue with our current portal which is not mobile friendly and does not allow some of the new functionality that is available in newer platforms.

Recommendation

The technical staff evaluated several solutions and reached out to other CSU’s and determined that Modo Labs is the best portal/mobile application solution for CSUSB. Modo Labs desktop/mobile platform gives us complete flexibility and control while minimizing effort and operational risk. A desktop/mobile application platform that is responsive in theme.

Modo Labs platform is used for delivering mobile applications at Northridge, SFSU, Sac State, San Marcos, Pomona, Stanislaus, San Marcos, Fresno, Channel Islands and East Bay, and the Chancellor's Office. Bakersfield have just signed a contract with them.

Budget Considerations

The project will be funded by a combination of one time funds and **The Vital and Expanded Technologies Initiative (VETI) Grant Awards FY 2018: Item 101 - CSUSB Mobile First Strategy: Standardization and Streamlining of Mobile Application Development.**

- This will cost more than \$10,000 (multiple-bid solicitation required)
- This will cost more than \$50,000 (Purchasing approval required)
- This will cost more than \$500,000 (Procurement Audit)
- This is considered a High-Risk (Liability) Project to CSUSB or the CSU

Subscription Term: 3 Years	1st Year Subscription: \$ 46,449
Set-up and/or One-time License fees	One-Time Fees: \$ 16,737
	Total First Year Fees: \$ 63,186

Total Fees are due and payable for the term above, as follows:

Year	Due Date	Amount
Year 1	Upon Execution of Order	\$ 63,186
Year 2	June 30, 2018	\$ 46,449
Year 3	June 30, 2019	\$ 46,449

Assessment Plan and Key Performance Indicators (KPI)

Provide a minimum of two (2) key performance indicators (KPI) will best indicate project success:

1. Increase the number of mobile applications
2. Decrease the time and effort to roll out and maintain mobile applications

Estimated Timeline

Project Start Date: August 1, 2017

Project Completion Date: June 1, 2018

Departmental Resource Allocation

-ACBI -ATI -DDTS -ECS -ISET -TNS -PMO -Web

Approval

This project will require IT Governance review during the _____ monthly meeting.

Lenora Rodgers July 10, 2017

Submitting MPP Submittal Date

_____ Approving MPP

Approval Date

Recreational Sports and Wellness Fusion Project For Review and Recommendation

Introduction

The need for the Project: The current membership software went end of life in October 2017 and we are on temporary maintenance agreement to continue receiving support. A new membership software solution must be in place by July 1st, 2018 when the current maintenance agreement expires.

What the project will contribute to student success: The project will allow SRWC to continue to offer excellent service and gives us the added benefit of allowing members to sign up online for personal training, outdoors trips and swimming lessons which contributes to our students' overall health and wellness.

Details

Term of the contract is for 5 Years May 1, 2018 - April 30, 2023

Name of Software (Version) Modules or Add-Ons

This project includes the following features:

1. Fusion Recreation Management Software (V3.0.1)
2. To include the following primary components:
3. Windows Desktop Client
4. Web-Based Member Portal (V2)
5. Hosting Services
6. Test Instance
7. FusionGO Mobile App
8. FusionIM League Management System

The complete SOW is attached to this document.

Challenges

1. Working with several campus partners to setup nightly PeopleSoft data imports, Coyote One card photo imports and PCI compliant online and in-housing Point of Sale systems.
2. Migrating data from our old database to the new one. Re-configuring the way our turnstiles are wired to allow access.
3. Working with several campus partners to setup nightly PeopleSoft data imports, Coyote One card photo imports and PCI compliant online and in-housing Point of Sale systems.
4. Migrating data from our old database to the new one. Re-configuring the way our turnstiles are wired to allow access.

Impact(s) if we do nothing

If we fail to proceed with this project then:

1. The current membership software went end of life in October 2017 and SRWC are on temporary maintenance agreement to continue receiving support. A new membership software solution must be in place by July 1st, 2018 when the current maintenance agreement expires.

2. **What happens if the project is not successful:** SRWC would be forced to continue running the existing software without a maintenance agreement which would be a security risk.

Recommendation

The approval of this project is required to allow the department of Recreational Sports and Wellness to continue to offer excellent service and gives us the added benefit of allowing members to sign up online for personal training, outdoors trips and swimming lessons which contributes to our students' overall health and wellness.

Budget Considerations

- This will cost more than \$10,000 (multiple-bid solicitation required)
- This will cost more than \$50,000 (Purchasing approval required)
- This will cost more than \$500,000 (Procurement Audit)
- This is considered a High-Risk (Liability) Project to CSUSB or the CSU

The total approximate cost for this project is \$119,000 over a 5 year contract. (Details available in SOW document)

Other considerations

None

Management Action Plan

Review and recommendation

24/7 Study Area Refresh Proposal

Introduction

The purpose of this project is to bring the computers that are in the PL-1109 open lab up to date in order to provide the best technology available for the new 24/7 Study Area for students that will be operational in Fall, 2017. This will be the only 24/7 open lab/study area on campus. Information Technology Services (ITS) has already spent over \$77,000 on new furniture, flooring, and renovations on the Pfau Library Addition, first floor for the 24/7 Study Area. By providing 24/7 access to the Study Area and lab, ITS will also incur staffing costs for the night-time support personnel.

Challenge(s)

- The existing PL-1109 lab computers are 6 years old and are beginning to fail.
- Limited lab access: currently only from 6:00am – 12:00 midnight, Monday – Friday and 7:00am – 7:00pm, Saturday and Sunday.
- At this time, students do not have a study area on campus for use “after hours”.

Alternatives

ITS will have to slowly refresh the computer lab over the next several years with alternate funding as it becomes available and we will need to continue to repair these older computers with new parts if we can't find other funding.

Impact(s) if we do nothing:

- Matching VETI funds of approx. \$46,350 will be taken back and given to another project.
- Frequency of hardware failure will increase as equipment ages.
- End user complaints will increase.
- Students will be forced to use older computer equipment for studying and research until new computers can be purchased at a later time.

Recommendation

ITS is recommending that all of the personal computers and Macs in the PL-1109 lab be funded for upgrades. As mentioned before, the equipment/infrastructure in this lab has not been updated since 2011. Upgrading the technologies in the 24/7 Study Area is important to the mission of the university in providing current technologies in support of student success.

Modo Labs platform is used for delivering mobile applications at Northridge, SFSU, Sac State, San Marcos, Pomona, Stanislaus, San Marcos, Fresno, Channel Islands and East Bay, and the Chancellor's Office. Bakersfield have just signed a contract with them.

Budget Considerations

The total cost for the 24/7 Study Area Computer Refresh Project is estimated at \$95,000.00. Partial VETI Grant funding for this project was approved for \$46,350 This is a one-time funding request for the other \$46,350 to match the funds.

- This will cost more than \$10,000 (multiple-bid solicitation required)
- This will cost more than \$50,000 (Purchasing approval required)
- This will cost more than \$500,000 (Procurement Audit)
- This is considered a High-Risk (Liability) Project to CSUSB or the CSU

Assessment Plan and Key Performance Indicators (KPI)

Provide a minimum of two (2) key performance indicators (KPI) will best indicate project success:

1. As mentioned above, the PL-1109 lab saw over 40,000 logins during it's currently limited business hours. We expect this number to drastically increase as more students become aware of the 24/7 Study Area and lab. This is a tangible number that we will monitor over time.
2. We will be sending Student Satisfaction Surveys out over the next year to the student population asking for feedback regarding their use of the study area/lab days/times and if they are pleased with the technology and services offered. We will also ask them for suggestions on improvements to the study area/lab. These results are also measurable.



Estimated Timeline

Project Start Date: August 1, 2017

Project Completion Date: September 15, 2017

Departmental Resource Allocation

-ACBI -ATI -DDTS -ECS/TSC -ISET -TNS -PMO -Web

Approval

This project will require IT Governance review during the _____ monthly meeting.

Jim Olinger _____ July 25, 2017

Submitting MPP _____ Submittal Date

_____ Approving MPP
Approval Date

Management Action Plan

Review and recommendation

Portal/Mobile Application Software

Introduction

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Challenge(s)

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Alternatives

Continue to utilize the CSUSB Computer Science and Engineering students with slow production of new applications and enhancements for mobile devices. Continue with our current portal which is not mobile friendly and does not allow some of the new functionality that is available in newer platforms.



Impact(s) if we do nothing:

Continue to utilize the CSUSB Computer Science and Engineering students with slow production of new applications and enhancements. Continue with our current portal which is not mobile friendly and does not allow some of the new functionality that is available in newer platforms.

Recommendation

The technical staff evaluated several solutions and reached out to other CSU’s and determined that Modo Labs is the best portal/mobile application solution for CSUSB. Modo Labs desktop/mobile platform gives us complete flexibility and control while minimizing effort and operational risk. A desktop/mobile application platform that is responsive in theme.

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Assessment Plan and Key Performance Indicators (KPI)

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1. Increase the number of mobile applications
2. Decrease the time and effort to roll out and maintain mobile applications

Estimated Timeline

Project Start Date: August 1, 2017

Project Completion Date: June 1, 2018

Departmental Resource Allocation

-ACBI -ATI -DDTS -ECS -ISET -TNS -PMO -Web

Approval

This project will require IT Governance review during the _____ monthly meeting.

Lenora Rodgers July 10, 2017

Submitting MPP Submittal Date

_____ Approving MPP

Approval Date

Appendix

1. ITS Strategic Plan
2. Process Automation
3. PeopleFirst @ ITS
4. Accessible Technology Initiative



ITS Strategic Plan Implementation Plan Year 2

Goal/ Objective: E-Learning

2.1.1 Tools developed for self-evaluating or peer-reviewing of online courses and instruction.

In progress:

- We have increased awareness of the online resources available via the CO regarding training in applying the QM or QLT rubric of online course quality
- We are preparing web resources to educate the campus community regarding the standards used in assessing online course quality.

2.1.3 Support at least 5 CSUSB faculty members to become QOLT certified reviewers.

Have to complete 5 different courses

In progress:

- We are working with TRC to flesh out a program of professional development resulting in a self-sustaining faculty community of QLT or QM-certified peers;
- ID's are building their professional development plan to include the ability to offer support in the area (e.g., Tracy Medrano became QM reviewer herself)
By end of this year all ID's should be certified.

2.1.4 In collaboration with TRC and other campus entities, develop an online teaching academy and pilot it within the next two years.

In progress: TRC and ATI are working together to develop this e-learning academy as a year-long program during 2018-19.

2.3.1 Increase the number of collaborative workshops that help develop online courses/modules.

Update:

- Such workshops are schedule quarterly and include collaborative workshops with the Teaching Resource Center and Academic Research.
 - However, workshops are not an efficient way of helping faculty with online course design. We are working on developing web resources for faculty teaching them how to move certain elements of their courses online.

2.3.2 Increase campus participation in CO CRT initiatives.

Update: There is considerable uncertainty regarding the future of the CRT program. However, the TRC Director is working on with the Faculty Associate to create a campus community of CRT grantees (first meeting was on Dec. 6) No CRT funds for the next year.

- We will focus our efforts on Virtual Labs, and continue participation in the AL\$ and QA programs

*2.1.4 – Stack depending on new TRC Director

3.1.1 Number of new faculty attending learning technology conferences annually.

Update: We have developed the IDEA Partner program which will enable faculty to work closely with ATI on learning technologies and will fund faculty participation in those conferences. This program will debut in Fall 2018.

3.3.2 In collaboration with TRC, develop a process for recommending, pilot testing, adoption, and full integration of learning technology services, tools, and solutions.

Completed: Year 1 during ATI retreat

4.1.1 Prepare and present an annual report on key trends in instructional technology.- *M. Chen*

Update: Two institutes on R and JMP are scheduled for Winter(January) and Spring(March) quarter respectively

4.1.2 Establish and implement a replacement plan for newly acquired technology equipment and active learning spaces. -M. Chen

In progress:

- Discussions started with the classroom team and instructional technology team.
- Inventory is being developed of all smart classrooms
- June 16, 2018 update: All extra equipment for SBS and COE upgrades have been purchased and have arrived on campus. Classroom Support will begin installation in late June with TSC technicians. This will run through the end of Summer.

Goal/ Objective: iCoyote

1.1.1 Implement app Improvements- *J. O'Linger, L. Rodgers*

Update:

- Jim will be following up with Lenora
- June 16, 2018 update: CSUSB Mobile web & AI development has moved to Web Services from ACBI.

1.2.1 Students should be able to access additional course related material through Blackboard or MyCoyote.- *J. O'Linger, L. Rodgers*

Ongoing: Several resources are now available in Blackboard for both Faculty and Staff and we are looking at adding more options in the future.

Online resources are being pushed to new courses for faculty and students. We're reviewing other online options through the Chancellor's Office and other resources.

1.3.1 Implement a service fulfillment system with a built in communication process that allows members of the campus community to provide feedback to ITS. The system should work with any device, can provide continuous feedback to ITS regarding services rendered and should also be cable of identifying bottlenecks in service. Members of the community should have visibility of service reports.

- *F. Zuniga, J. O'Linger*

Update:

- The campus has chosen Cherwell as the Enterprise Service Management tool. Cherwell 9.1 Phase I will operational by the end of winter quarter. This will include Incident Requests for Web Services, TNS and TSC – University Hall incidents. It will also include TNS workflow for network and security requests.
- UPDATE – TSC will implement a Kayako replacement by August 1st, with TNS workflow following along with the rest of ITS.

2.1.1 In classrooms, faculty should be able to select and use the operation system of choice for a classroom.- *J. O'Linger*

Update: We have brought up and tested Horizon VDIs for this pilot. I will be working with the SOP group to see who would like this option. Take in Computer Science will be the pilot next quarter.

2.2.1 In lecture halls / auditoriums faculty should be able to use 3D document cameras to present items and students should have access to 3D glasses. - *Dr. Chen*

In progress: Explore various emerging technologies to enhance and empower presentations in the classrooms such as Mersive Solstice wireless presentation, interactive short-throw projectors (On-going process)

4.1.1 Set up three presentation practice rooms. Meeting/study rooms should have check out or reservation functionality (off and on campus). Faculty should be able to record to Blackboard seamlessly without needing to download to local system - *Dr. Chen*

In progress:

- COE is setting up a space with VETI grant funding
- Athletics department is renovating a student athletes success area with active learning design and support
- ATI will build a one-touch presentation station for tech zone

4.2.1 Live chat features from the website so students can ask common questions such as: “How do I drop a class?” -*J. O'Linger, M. Casadonte*

On hold for Cherwell Implementation – Web Services and the TSC will work together to implement Cherwell Chat tied to campus websites.

4.3.1 Electronic key smith machine to speed up key access. -*J. O'Linger*

Update: SimpleK will be completed in Spring, 2018

Goal/ Objective: **University Analytics**

4.1.1 Establish collaboration on policy issues with Faculty committees, ATDL. – *Javier Torner, Sam Sudhakar, IR*

In progress: The Institutional Data Committee formed a working group which developed a draft Privacy and Ethical Use policy. The working group is waiting for direction from the Chancellor's Office.

4.2.1 Develop/deploy training modules on data access and ethical use. - *Javier Torner, Sam Sudhakar, IR*

In progress: The Institutional Data Committee formed a working group which developed a draft privacy and ethical use tool for providing training. The working group is waiting for direction from the Chancellor's Office for implementation.

Goal/ Objective: Stable & Secure Infrastructure

1.2.1 100% of online programs will have access to virtual computing resources as they are developed.
– *Gerard Au, Javier Torner*

Completed: Virtual infrastructure is set up and ready to be used. IT Services will need to work with faculty who have virtual computing needs to identify courses that these can be piloted to.

2.1.1 At least 1 collaborative learning classroom per building by 2019.- *M. Chen*

In progress:

- Math dept. – JB in planning
- Honors program – 3 classrooms in new student housing building
- COE 203 – completed
- PE renovating a movement lab with active learning space design

2.2.1 Common scheduling system to reserve collaborative study spaces for student by 2017-18. *M. Chen, L. Rodgers*

In progress

2.3.1 At least 50 technology-enabled collaborative study spaces across campus by 2018.- *M. Chen, J. Olinger*

In progress: 3 study spaces created in the basement of the library with collaborative furniture

- Exploring Tech Zone ideas with SMSU

3.1.2 100% outdoor coverage along Coyote Walk by the end of 2017 and 100% across populated campus locations by 2020. -*Gerard Au*

Completed: Coyote Walk wireless in-fill project has been completed. There is now overage between SBS and JB. With the addition of the Center for Global Innovation and the Student Union Expansion, there are plans to add additional wireless access points throughout Coyote Walk.

3.1.3 Enhanced cellular coverage across various carriers for both campuses. – *Gerard Au*

Completed: (3 of 4 major carriers): T-Mobile cell site went live in winter 2018. AT&T expansion completed by end of 2017. Sprint improvement in progress in summer 2018. Verizon coverage improvement pending.

4.1.1 Implement multi-factor sign on for all applications with access to Personal Identifiable Information (PII) by 2020. –*Javier Torner*

In progress: Multi-factor authentication has been implemented for users with access to critical systems and confidential information (Level 1 data). The next phase is to implement the use of multi-factor for users with access to significant amounts of sensitive information (Level 2 data).

4.2.1 Replace OneCard with digital/ mobile ID to support advance features (physical access, etc) by 2019. This is tied to the CO statewide OneCard system now being vetted. – *Jim O’Linger & Chris Bradney*

Update:

- Statewide Chancellor’s Office OneCard RFP winners will be announced by September 1, 2018 by the Chancellor’s Office. Possible vendors include CBORD Gold and Blackboard Transact and another vendor.
- We’re also looking at online photo upload vendors who review user-submitted photos to use with our OneCard system.

Goal/ Objective: **iEngage**

2.1.1 Facilitate a Technology Summit based on community feedback by year 2018. - *Felix Zuniga*

Update 6-19-2018: Begin by engaging in Hispanic Heritage Month Activities – Showcase of VR Project by Dr. Lilianna Gallegos, HETS – Dr. Javier Torner, HACU - Felix

4.1.1 Hold 3 seats for community partners at Tech Training on a quarterly basis – *Jim O’Linger*

Update:

- ITS Training Services hosted a pilot session with Veterans Affairs last year
- We are going to work with Diane Podolske in Community Engagement to reach a broader range of external groups
- June 16, 2018 update: ITS Training Services has invited other community groups to participate in training, but sometimes there are authentication issues with non-campus trainees. We will use Sunny's guest authentication system. We will also reach out again to Diane Podolske for community partners to participate in the training.

4.2.1 Create a policy/procedure for facilitating this process – *Jim O’Linger*

Update: Jim will work with Gerard, Doris and Felix on setting up a policy/procedure for groups requesting these seats.

2017-2018 Completed Process Automation Projects

Financial Aid

Cal Grant Processing

FAFSA/ISIR Query Identification Processing

Packaging Processing

TEACH Grant Processing (Exit)

TEACH Grant Processing (Entrance)

Federal Loans/Packaging

Cal Grant/Repackaging Aid

Scholarships (On-Campus) Phase I

Federal Loans/Processing

Office of the Registrar

Online Filing of Graduation Check

Reports Generated For UNKN Articulations

Career Advancement Pathways Task force updates

Listed below is a summary of progress from the 2017-2018 year on the work of the Career Advancement Pathways task force:

- Portfolium training- Workshop facilitated by Portfolium focused on skill identification/development for members of the division
- Worked on developing technical skills assessment instrument for the division
- Met with the Staff Development Center to discuss common training opportunities (ex. ITIL.)
- Define Pathways- The task force worked with the subcommittees to enhance career pathways
- Worked with ITS Leadership Team to improve the Professional Development Plan

Communications Task force updates

The taskforce made several recommendations on objectives that could improve communication in the ITS division. Listed below are a sample of the objectives that have been worked on by our ITS teams and leadership:

- **Purpose 2.1** - Clearly define roles within teams and projects
- **Knowledge 4.2** -Develop a thorough and living knowledgebase for the organization
- **Knowledge 4.3** - Implement an employee technical development training plan
- **Respect 3.3** - Establish a divisional process for identifying, submitting, reporting, and tracking employee concerns (e.g. communication, microaggressions, etc.)
- **Transparency 1.2** - Create departmental escalation procedures

OfficeVibe

The ITS division has adopted the use of OfficeVibe as a tool to support communication and respect as called for in Objective 3.3. This tool allows for communication to occur between staff and management and senior leadership anonymously if necessary. The tool provides scores on engagement and tips to improve communication amongst the teams.

Cherwell

The Enterprise Service Management Solution called Cherwell, will serve as a new IT service Management Solution for the ITS Division and serve as a base for all new areas on campus that would like to use the service management tool. This solution works to enhance our knowledge as an organization as described in objectives knowledge 4.2 and transparency 1.2. We will clearly be establishing departmental escalation procedures as well as delivering a thorough and living knowledgebase.

Team Communication

How we work as teams and as a division is greatly impacted by our team communication. Simple changes in departmental procedures go a long way. This year we decided to focus on communicating what people are working on with a specific focus on projects and duties. All department managers have agreed to work on improving this within their teams as outlined in objective Purpose 2.1.

Technical Development

All employees have been asked to work on a professional development plan with their managers, with a focus on technical development for work purposes as called for in Knowledge 4.3.



President Annual Summary Report for Reporting Period July 1st 2015 through June 30th 2016

California State University, San Bernardino

Reporting Year: 2015-2016

Prepared by: Leon McNaught, CSUSB Accessible Technology Initiative Coordinator

Background

This executive summary provides an overall view of the direction of CSUSB's efforts to comply in the three priorities of the Accessible Technology Initiative (ATI): Instructional Materials, Procurement, Web, and subsequent success indicators. [Coded Memo AA-2015-22](#), issued December 2, 2015, included requirements to address the system-wide findings from the Accessible Technology audit completed in 2015 (Audit Report 14 -28). The audit recommended that each campus submit an annual summary of accomplishments and remaining effort to inform the campus president as to the status of the Accessible Technology Initiative effort on campus.

Interpreting This Document: The 2015-2016 President Annual Summary Report

Keep in mind that this report is summarizing data that is now two reporting cycles old. This report's focus is to look back at the 2015-2016 year's data that includes July 1st 2015 through June 30th 2016, even although we are now concluding the 2016-2017 period (June 30, 2017) and are beginning the 2017-2018 period.

Accomplishments for the just concluded 2016-2017 period will be transmitted in November 2017 and summarized in this report format July 2018. This delayed cycle allows sufficient time for the Chancellor's Office ATI department to aggregate and analyze reporting from the entire CSU; however, this report's due date will likely be aligned with the annual report. A graphical representation of the annual ATI reporting timeline is presented in the chart below with emphasis on where this document fits within that sequence. Both in the timeline and the three priority area tables, the 2015-2016 report data is emphasized with orange shading; this is the primary information this document was intended to convey.

Since this report does not represent CSUSB's most recent accomplishments, we have also included a projection of what we intend to report for the current 2016-2017 period (the far most right column on each of the priority area tables below).



The ATI Reporting Cycle over three years. We have just concluded the 2016-2017 period (June 30 2017). This document: President Summary Report (also highlighted in orange above) summarizes the accomplishments of the 2015-2016 reporting period that closed on June 30 of 2016.

About the ATI Annual Report

The President Annual Summary Report is a distillation of the larger Accessible Technology Initiative annual report, which is comprised of 158 areas of measurement (Success Indicators) contained in 24 larger goals within three priority areas: Web, Instructional Materials, and Procurement.

Status Levels Indicators

Each campus is responsible for evaluating the institutional capacity and assigning a status in each of the 158 Success Indicators contained in the annual report. Each of the larger 24 goals obtain their status level based on the average of the underlying Success Indicators status levels. The table below shows the range of statuses from “Not Started” at the lowest end to “Optimizing” at the high end.

Goals with status level assigned at “Established” or above have reached the required minimum combination of procedures, documentation, and resources to suffice as a standard practice.

Status Levels	Description for Procedures	Description for Documentation	Description for Resources
Not Started	No action has been taken yet.	No documentation has yet been generated.	No resources have yet been allocated.
Initiated	The campus has an ad hoc or developing practice. Procedures, if in place, are generally ad hoc.	Documentation is generally absent.	Resources have been tentatively identified but not yet allocated.
Defined	The campus has a common practice. Procedures, if in place, are consistent but informal.	Documentation, if present, is in working draft.	Resources have been firmly identified but not yet allocated.
Established	The campus has a standard practice. Procedures are consistent and formal.	Documentation is complete and fully reflects the standard practice.	Resources have been both identified and allocated.
Managed	The campus has a mature practice. Procedures are also in place to track and capture success indicators (milestones and measures of success).	Documentation is complete and fully reflects the standard practice.	Resources have been both identified and allocated.
Optimized	The campus has a mature practice. In addition, procedures are in place to conduct regular administrative reviews of success indicators to gauge effectiveness and implement improvements.	Documentation is continually revised to reflect the managed practice. Periodic administrative review of documentation is conducted.	Resources have been both identified and allocated. Periodic administrative review of resource allocations is conducted

Notable Milestones for the 2015-2016 ATI Annual Reporting Period

The 2015-16 reporting period was the first where documentary evidence was required to substantiate the selection of a status level assigned by each campus. The purpose of requiring submittal of evidence along with the ATI annual report was to ensure that campuses were evaluating their processes with the same measurements. In previous years, ATI noticed that although campuses had ranked their statuses as high in some areas, their processes were underdeveloped compared to campuses who rated their statuses at a lower level. This change understandably caused many campuses to downgrade some statuses in the 2015-2016 reporting period if there was insufficient documentation available to support the previous year's assigned status.

Typical documentary evidence CSUSB has provided to support selection of a status level include:

- Process & procedure documentation
- Training guides and training attendance records
- Position descriptions and other proof of resource allocation
- Steering Committee, subcommittees, and workgroup minutes and other related correspondence

CSUSB's Accessible Technology Initiative staff setup a CSYou SharePoint site to store evidence, correspondence, and general documentation in preparation for inclusion with the 2015-2016 annual report submission. The Chancellor's Office Accessible Technology Initiative staff and the CSUSB campus auditor have access to this resource. CSUSB's Accessible Technology Initiative staff continue to use this resource regularly to gather documentation.

Progress and Remaining Effort in each ATI Priority area

The following information is presented in three tables split by priority area. Under each priority area are the associated goals; the goal's status level is obtained by averaging the underlying success indicator status levels. The inclusion of the CSUSB 14-15 column provides historical data to help place this report in context. The 15-16 column is the focus of this report. The CSU Median column provides the average status levels CSU-wide when averaging the statuses at each institution for the 15-16 data. Finally, the 2016-2017 column provides an estimate/look ahead at the information we will report for the 2016-2017 period that concluded June 31, 2017.

Web 2015-2016 (July 1 2015 to June 31 2016)

Web Goals	CSUSB 2014-2015 (comparison)	CSUSB 2015-2016 (this report)	CSU Median 2015-2016 (comparison)	CSUSB 2016-2017 (Estimate July 1 st)
1.0 Evaluation Process: Identify and repair or replace inaccessible websites, web applications, and digital content.	Initiated	Initiated +1 status level upgrade	Established	Defined +1 status level upgrade
2.0 New Web Development: New website/web application and digital content development complies with all Section 508 accessibility guidelines.	Initiated	Defined +1 status level upgrade	Established	Established +1 status level upgrade
3.0 Monitoring Process: Updating and maintenance of websites/web applications and digital content comply with Section 508 Accessibility Standards.	Initiated	Initiated	Defined	Defined +1 status level upgrade
4.0 Exemptions Process: Documented non-compliant websites, web applications and digital content must be delivered in an equally effective alternate format and granted an exemption.	Not Started	Initiated +1 status level upgrade	Defined	Defined +1 status level upgrade
5.0 Training Process: Professional development training has incorporated Section 508 accessibility guidelines into website and web applications development and digital content preparation.	Defined	Initiated -1 Status Level Downgrade	Defined	Initiated
6.0 Communication: In general the campus community is aware of Section 508 guidelines to make web based information available to everyone (students, staff, faculty and the general public) regardless of disability.	Initiated	Initiated	Defined	Defined +1 status level upgrade
7.0 Administrative Process: Campus governance entities are aware of and kept informed about web accessibility.	Initiated	Initiated	Defined	Initiated

Focus on the 2015-2016 cycle for web was to formalize processes and increase documentation for ad-hoc processes to allow status upgrades for the future reporting period.

Summary milestones met base on yearly plan:

- Developed and published web accessibility plan
- Implemented compliance scores distribution to content editors automatically
- Web Services Drupal training now includes accessibility
- Launched Accessible Technology Initiative website

- Web accessibility is now included in the web development workflow process

Remaining Effort: Areas that are below Established (Not Started, Initiated, and Defined):

- Manual evaluation process implementation - Defined
- Increase training opportunities for content editors and developers – Initiated
- Implementation of CommonLook Clarity and Office for digital content identification on web and remediation – Defined
- Distribute web accessibility metrics to campus governance entities – Initiated

Instructional Materials 2015-2016 (July 1 2015 to June 31 2016)

Instructional Materials Goals	CSUSB 2014-2015 (comparison)	CSUSB 2015-2016 (This document)	CSU Median 2015-2016 (comparison)	CSUSB 2016-2017 (Estimate July 1 st)
1.0 Timely Adoption: The campus has implemented a comprehensive plan to ensure the timely adoption of textbooks and other instructional materials.	Initiated	Defined +1 status level upgrade	Established	Defined
2.0 Identification of IM for Late-Hire Faculty: The campus has implemented a comprehensive plan to ensure that textbooks have been identified for courses with late-hire faculty.	Not Started	Initiated +1 status level upgrade	Initiated	Defined +1 status level upgrade
3.0 Early Identification of Students with Disabilities: The campus has implemented a comprehensive plan to ensure that students with disabilities are identified and able to request alternate media materials in a timely manner.	Established	Established	Managed	Established
4.0 Faculty Use of LMS (or non-LMS) Course Websites: The campus has implemented policies and procedures to promote the posting of all required curricular and instructional resources (including print-based and multimedia materials) in a central, accessible electronic location.	Initiated	Initiated	Defined	Defined +1 status level upgrade
5.0 Accessibility Requirements for Multimedia: The campus has implemented policies and procedures to ensure that accessibility requirements have been incorporated into the adoption process for all multimedia-based instructional resources.	Initiated	Initiated	Defined	Defined +1 status level upgrade
6.0 Accessibility Requirements for Curricular Review and Approval: The campus has implemented policies and procedures to ensure that accessibility requirements have been incorporated into the curricular review process.	Initiated	Initiated	Defined	Defined +1 status level upgrade
7.0 Supporting Faculty Creation of Accessible IM: The campus has implemented policies and procedures to support faculty in selecting, authoring, and delivering accessible instructional materials.	Initiated	Initiated	Defined	Defined +1 status level upgrade
8.0 Communication Process and Training Plan: The campus has implemented a broad-based ATI awareness campaign, supported by a comprehensive training infrastructure to increase technological accessibility across the campus.	Initiated	Established +2 status level upgrades	Defined	Established
9.0 Process Indicators: The campus IMAP committee has sufficient breadth, resources, and authority to effectively implement a comprehensive IMAP initiative.	Not Started	Defined +2 status level upgrades	Defined	Established +1 status level upgrade

Progress continued and was driven by the Instructional Materials subcommittee. Additionally, the Assistive Technology & Accessibility Center made a pivot toward faculty and staff accessibility remediation services. Upcoming opportunities to highlight instructional material accessibility include the Q2S conversion.

Summary milestones met base on yearly plan:

- Faculty Senate formerly passed “Textbook Adoption Policy”
- Remediation of inaccessible course content began with self-selecting faculty participants
- Training materials developed and distributed to assist faculty with in creating accessible documents

Remaining Effort: Areas that are below Established (Not Started, Initiated, and Defined):

- Distribute timely adoption metrics - Defined
- EEAAP (Equally Effective Alternate Access Plan) for Blackboard courses online - Defined
- Promote awareness of Instructional Material accessibility requirements to faculty - Defined
- Focus on LMS multimedia inventory and usage - Defined
- Develop Blackboard course for faculty regarding accessibility best practices - Defined
- Review and update campus IMAP (Instructional Material Accessibility Plan) - Defined

Procurement 2015-2016 (July 1 2015 to June 31 2016)

Procurement Goals	CSUSB 2014-2015 (comparison)	CSUSB 2015-2016 (This Report)	CSU Median 2015-2016 (comparison)	CSUSB 2016-2017 (Estimate July 1 st)
1.0 Procurement Procedures: An ATI Electronic and Information Technology (E&IT) Procurement Plan, documents, forms, and other materials to support 508 procurements at the campus are created and published.	Defined	Defined	Established	Defined
2.0 Staffing or role definition: ATI procurement team is fully staffed with clearly defined roles for processing E&IT procurements.	Initiated	Defined +1 status level upgrade	Established	Established +1 status level upgrade
3.0 Exemptions Process: A well-documented process has been established and is used for exemptions to E&IT procurements.	Established	Defined -1 Status Level Downgrade	Established	Defined
4.0 Equally Effective Access Plans: Equally Effective Access Plans are created for E&IT products that are not fully 508 compliant.	Established	Initiated -2 Status Level Downgrades	Defined	Defined +1 status level upgrade
5.0 Training: All parties involved in E&IT procurement have been trained, and a continual training program is in place.	Defined	Initiated -1 Status Level Downgrade	Defined	Initiated
6.0 Outreach (Communications): All individuals on campus involved in the purchasing of goods are knowledgeable about Section 508 in the context of E&IT procurement.	Initiated	Initiated	Defined	Defined +1 status level upgrade
7.0 Evaluation & Monitoring: Campus has established a continual evaluation process with standard forms and procedures. Feedback from the process along with direction is provided to training, outreach, and other groups involved in E&IT procurements.	Not Started	Not Started	Initiated	Initiated +1 status level upgrade
8.0 Experience/Implementation: Campuses have sufficient experience and expertise in completing E&IT procurements.	Defined	Defined	Defined	Defined

The area of procurement suffered downgrades in the 2015-2016 period due to severe understaffing and due to increased requirements of documentary evidence on the annual report. Although many success indicators were downgraded from the previous year, work still progressed. Little progress was made on

specifically addressing annual report goals due to understaffing. Much of the work that occurred was ad hoc to triage the high volume of work; as a result, there was not time to create consistent formal processes. Previous status level assignments in 2014-2015 were likely too optimistic given institutional capacity.

Summary milestones met base on yearly plan:

- Enforce ICT procurement checklist form for software purchases

Remaining Effort: Areas that are below Established (Not Started, Initiated, and Defined):

- Form Equally Effective Alternate Access Plan committee - Defined
- Review current processes for ICT (Information and Communication Technology) purchases - Defined
- Increase training for buyers and procurement card holders - Initiated
- Increase awareness with campus constituents regarding Accessible Technology Initiative and accessible procurement - Defined

Outlook

The recently concluded 2016-2017 reporting period (as of June 30, 2017) was the first in which CSUSB had a dedicated ATI Coordinator. Status upgrades have continued and the initiative's profile increased via marketing and outreach activities. Presentations were made by the ATI team at several meetings throughout campus including the IT Governance Executive Committee meeting. At the time of this writing, the 2017-2018 reporting had already begun. The 2017-2018 reporting period will represent the first full year with an ATI Coordinator and a gradual building of both capacity and output in pursuit of the ATI goals.

The Accessible Technology Initiative Team, the Steering Committee and Sub Committees are making significant progress and are committed to continuing to improving accessibility on all the three areas in the upcoming academic year.

Accessible Technology Initiative@CSUSB

The [Accessible Technology Initiative \(ATI\)](#) reflects the California State University's (CSU) commitment to provide access to information resources and technologies to individuals with disabilities. This commitment is articulated in Executive Order 926 (EO 926), the CSU Board of Trustees Policy on Disability Support and Accommodations. The initiative is comprised of facilitating improvements in three priority areas:

1. Web Accessibility,
2. Instructional Materials
3. Procurement of Electronic & Information technology

As a result of this executive order and subsequent Academic Affairs coded memorandums, CSUSB formulated the ATI Steering Committee which is comprised of a student representative, faculty, staff and managers to develop policies and procedures to bring the campus into compliance with the directives set forth in these communications.

Executive Sponsors

Brian Haynes Vice President, Student Affairs
Sam Sudhakar..... Vice President & CIO, Information Technology Services

ATI Steering Committee

Alan Van Fleet Graphic Designer, Strategic Communications
Brian Haynes, Co-Chair Vice President, Student Affairs
César PortilloAVP, Human Resources
Christine Fundell Lead Accessibility Specialist, Assistive Technology & Accessibility Center, Academic Technologies & Innovation
Eva Sorrell Sr. Assistant Librarian, Library Technical Services
Joel Fite Web Developer, Information Technology Services
Jonathan Anderson Chair, Public Administration
Leon McNaught Accessible Technology Initiative Coordinator, Academic Technologies & Innovation
Marcelle Daniels Director, Services to Students with Disabilities

Michael Chen Director, Academic Technologies & Innovation

Rong Chen Associate Provost, Academic and International Programs

Rosa Padilla Web Accessibility Coordinator, Academic Technologies & Innovation

Sam Sudhakar, Co-Chair Vice President & CIO, Information Technology Services

Savanah Donahue ASI Student Representative

Terri Nelson Professor of French, Dept. of World Languages & Literatures

Tiffany Talley Buyer, Purchasing

Alternates

Alejandro Cassadas Employment Manager, Human Resources

Angela Gillespie Senior Creative Strategist, Strategic Communication

Beth Jaworski Assistant Vice President, Student Services

David Gee Director, Procurement Services

Shari Williams-Hector Alternate Media Coordinator, Services to Students with Disabilities

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Joel Fite Web Developer, Information Technology Services

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David Watts..... Manager, Coyote Bookstore
Eva Sorrell Sr. Assistant Librarian, Library Technical Services
Leon McNaught Accessible Technology Initiative Coordinator, Academic Technologies & Innovation
Marcelle Daniels Director, Services to Students with Disabilities
Michael Chen Director, Academic Technologies & Innovation
Terri Nelson Professor of French, Dept. of World Languages & Literatures

Procurement Subcommittee

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Tiffany Talley Buyer, Purchasing

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