

Instructional & Information Technology Services

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Progress Report on AY 2016/17 Goals

Technology as a Key Component for Innovative Instruction

- **Multi-Year Classroom Technology Upgrades:** Much of the classroom audio-visual equipment in classrooms has remained unchanged for many years while the industry standards moved from the historical 4:3 (box) format to the wide-screen High Definition (HD) formats. To address this problem, IITS upgraded 30 classrooms in SBSB and over 20 in Markstein during the summer of 2016. This effort was part of a multi-year plan to update the classroom instructional technology equipment across campus with High Definition capable projectors that are 50% brighter than the current units and offer higher quality projection. During the summer of 2017, IITS is upgrading an additional thirty-six (36) classrooms in Academic Hall and University Hall. Key deliverables of the second phase of the project included installing larger screens with an offset in order to free up white board space and yet provide a larger projected image. In addition to new HD projectors, these enhanced classrooms include wireless presentation technology, touchscreen lectern monitors, push button controls, digital wired connections for HDMI, and 9 foot screens. As the fiscal year came to a close, most of these classroom upgrades were completed, with IITS still planning to replace all lectern computers in classrooms across campus prior to the start of the Fall 2017 term in order to provide improved performance.
- **CALM Saving:** This past fiscal year the textbook savings at CSUSM continued to grow as the campus reached \$2.4 million since the program started in Spring 2013. Due to the efforts of over 70 faculty in 24 different disciplines, CSUSM's combined efforts have provided significant savings to over 22,000 students, with an average savings of \$104 per course. This academic year alone, the text book savings will add up to just over \$900,000. With thirteen (13) new faculty *CALMing* at least one course this year, CSUSM continues to actively support textbook affordability initiatives. In partnership with faculty and the Library, this program continues to be a huge success in serving CSUSM students. CSUSM also received a \$50,000 AB 798 grant in the Fall of 2016; this was the maximum allowable award. In Spring 2017 CSUSM received an additional \$15,450 to support our AY 17/18 initiatives. Of particular importance is the work preparing for the implementation of Senate Bill 1359, which requires campuses to identify classes with free course materials in online schedules. This requirement takes effect on January 1, 2018. As present, CSUSM is ready to display zero-cost course materials (ZCCM) designation for appropriate courses. A modification was developed and deployed in late June and courses meeting the ZCCM standards are being coded for the Fall 2017 semester. Staff in Instructional Development Services will update the Class Schedule for any course that does not require additional instructional materials or courses using Library or other course materials paid for by the campus, resulting in free access to all students for all of the courses materials.
- **Technology Resource Center Upgrades:** During the summer of 2017, IITS began construction of a new Technology Resource Center (TRC) for faculty and Instructional Development Services (IDS) staff. When it opens to faculty in August 2017, the new TRC will be enlarged by 200 square feet and will include offices for Instructional Development staff. The objective of this project is

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to make it easier for faculty seek help and to make it an even better place for faculty to collaborate with the IDS team or seek assistance.

- **Faculty Training:** IDS hosted multiple faculty training programs during the academic year with 12 participants attending Flipped Camp, 103 participants in 14 sessions of Fall 2016 Cougar Courses training, and 50 participants in 13 sessions of Spring 2017 Cougar Courses training.
- **Online Course Reviews:** In support of the CSU Quality Assurance Initiative, IDS collaborated with the Faculty Center to form a team of reviewers to analyze 21 courses using the CSU Quality Online Learning & Teaching (QOLT) instrument. This peer-review process provides feedback and recognition for high quality online courses. There are 11 courses that were revised and have met the 24 core objectives and 85% of the overall standards. By August 2017, an additional four (4) courses will meet these standards.
- **GIS:** An increasing number of faculty are integrating Geographic Information System (GIS) projects into their courses. During the academic year, a total of eighteen (18) faculty used some element of GIS in their instruction. IITS continues to support faculty efforts through the technical assistance provided by a dedicated GIS expert.
- **Learning Glass:** The Learning Glass is a transparent whiteboard paired with a lecture capture system that allows instructors to write lecture notes on a glass board while maintaining face-to-face contact with students. Over 24 sessions were recorded by four faculty.

Mobile First Strategy

- **Campus App:** In 2016, CSUSM introduced its first campus Mobile App. During the current academic year, the Mobile App team (that includes the Office of Communications), has continued to add functionality. Students are now able to Add, Drop, and Swap Classes, as well as access the Degree Planner and Schedule Assistant. Since the release of the Mobile App, CSUSM has continued to see good adoption rates with over 8,000 downloads. Page views are over 300,000, with myCSUSM access via the Mobile App showing strong use with approximately 3,500 unique users. As of June 30, IITS is working to enable access to Financial Aid information, review student financial information, and pay their registration fees. IITS is also working on integrating Moodle into the Mobile App with Cougar Courses being available in the Fall 2017 term. On a fun note, the Starbucks livestream has been a popular function within the App with page views almost equal to that of the myCSUSM functionality. Recently, IITS completed setup for a second livestream for the Coffee Cart. These achievements are part of the vision to create a single campus app that would eventually become a primary means by which students conduct routine and daily transactions with university services.
- **Responsive Website:** In 2016, the campus homepage and second level pages were converted to a mobile-first design to support phones, tablets and other smaller or variable form factor displays. This year the remainder of the websites were updated to the responsive design. Over the past year, website traffic coming from phones and mobile devices has been stable, with only a slight increase. At present the traffic from mobile devices is approximately 27% of the total.

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Technology Support to the Campus Community

- **Expanding Outdoor Wireless:** Students are clearly driving CSUSM's network traffic, as nearly 60% of all data is video, music, or social media related content. Another example of this demand for bandwidth was clearly demonstrated when CSUSM upgraded the existing campus outdoor wireless network to the latest technology during the summer of 2016. Comparing Spring 2016 and Fall 2016, CSUSM's outdoor wireless usage jumped by a factor of four between the two semesters. As of June 30, 2017, IITS completed additional outdoor upgrades to fill in some of the gaps in coverage. Upgraded/new service areas included locations with high student traffic, including the patio area outside Markstein Hall and popular waiting areas at Craven Circle and Chavez Circle. Additional service was also added for the Founder's Plaza stairs and the Sports Arena plaza. CSUSM students clearly have some of the best outdoor wireless of any campus.
- **Qualtrics training:** IITS purchased a university-wide license of Qualtrics Research Suite (<https://www.qualtrics.com/research-suite/>) that enabled use by all faculty, staff, and students for survey data collection and assessment. Qualtrics is a powerful research survey tool with over 100 different types of survey question formats. Originally requested by faculty on the Technology Policy Advisory Committee (TPAC) for survey-based research, the service includes a wide array of survey options and security permissions for collaboration with others in the same survey without having to share one's personal user credentials. The adoption of Qualtrics will replace the limited licensing that CSUSM currently provided with SurveyGizmo and other tools. As of the end of the fiscal year, 67 faculty and 26 students have been trained using Qualtrics and there are 257 total users.
- **New Technology Refresh Program (TRP):** Recognizing that current technology, regularly replaced, was central to the academic, research, and administrative functions of the university, CSUSM established a *Computer Refresh* Program in the late 1990s. For many years the program was supported by equipment loans. These loans were permanently suspended in FY 15/16 and the program was placed on hiatus until a sustainable model could be developed. In Spring 2017, a new *Technology Refresh* Program (TRP) was approved to cover General Fund faculty, staff, and administrators, as well as student labs and classroom instructor stations. Supported through a centrally funded model, the new TRP will provide all general fund faculty and staff with a standard computer, purchased, supported, and replaced every four years. The program uses a base funding of \$1,400 per unit and IITS is providing supplemental funding to tenure track faculty in order to support specific faculty configurations. This year IITS will replace Refresh 23 and older systems for faculty and Refresh 22 and older for staff.
- **Graduation Live Stream:** Using YouTube Live for the first time, IITS continued to support the campus' live streaming of graduation. Live stream statistics from all graduations generated approximately 2,400 unique views occurring over two days of graduation events. Countries utilizing the streaming service (in order of total session minutes viewed) include: USA, Mexico, Canada, UK, Norway, Spain, India, Netherlands, Japan, and South Korea. An additional step was taken to improve the reliability and bandwidth that involved running a temporary fiber cable from the McMahan House to the field. The dual fiber links provided 10 GB of capacity; far more

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capacity than was needed. The impact and value to the event was demonstrated in the fact that the video link was rock solid this year. IITS also provided limited wireless access to almost 8,000 devices. Top uses of the wireless service included: Snapchat, Instagram, Google, Youtube, and iTunes.

- **Athletics & new Sports Center:** IITS staff collaborated with Athletics to help design, acquire, and configure the necessary AV systems for efficient operation of field gear equipment to stream game activities. IITS also assisted Athletics in expanding their online service offerings to support the new Sports Center in order to track attendees and provide the ability to purchase tickets online. An unrelated project involved working with Athletics and Campus Recreation to implement InnoSoft Fusion, a new software system that supports the easy check out of equipment.
- **Event Support:** Media Production Services provided event production support for over 104 campus events, 28 Presidential events, and 126 field recording production events during the academic year.
- **Media Distribution:** The Mediasite service, used for hosting campus video service, supported over 67,864 hours of viewing of over 8,220 unique presentations.

Data Driven Decision Making

- **Degree, Set, Go Campaign:** Working closely with IP&A, OUGS, and the Vice Provost, the eAdvising and Data Analytics teams collaborated to support a variety of Graduation initiatives including Degree, Set, Go, that heavily leverages data provided by Degree Planner.
- **Student Advising Dashboard:** IITS developed a Tableau dashboard designed to provide a comprehensive view of a student's academic career to improve the advising experience for both advisors and students.
- **Course Need Reports:** IITS developed a series of reports designed to predict course demand in coming terms, helping the Vice Provost's office and college schedulers to more efficiently guide resource allocations during the schedule build process.
- **Senior Success:** IITS delivered numerous queries and reports pertaining to the Senior Success initiative, designed to accurately identify those students within 2 courses of graduation for the purpose of outreach and improved graduation outcomes.
- **Data Requests:** IITS developed or modified upwards of 50 PeopleSoft queries and 10 RaDAR reports involving diverse data elements, including student and applicant records, financial aid, employment records, and others.
- **Campus Strategies:** IITS has been involved or served on several campus committees, task forces, or strategic initiative working groups during the past year. These include: Facilitating Time to Graduation; HIPS; Unit Load Task Force; Predictive Analytics; and Degree, Set, Go. IITS has been an active participant in these various groups with campus stakeholders. Leveraging technology and data analytics, IITS worked with stakeholders to improve course scheduling, assist with improved course demand reports, develop strategies to facilitate higher student unit's loads, refine the class registrations process, and streamline the path to graduation. IITS

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continues to be an active partner in providing access to technology and information throughout the academic experience.

Cloud Computing and Online Services

- **Move from Box to Microsoft's OneDrive for Business:** Beginning in June 2017, CSUSM began a transition to Microsoft OneDrive from CSUSM's current cloud provider (Box). This move has significant fiscal savings (zero cost) and addresses a recent audit finding that the current provider does not meet. At the time of this report, the transition process is ongoing. Working with Microsoft, IITS are working to transition files and security permissions without any need for user intervention. As part of the transition, IITS in-person training opportunities as well as online resources are available. Each CSUSM faculty and staff member will receive one (1) terabyte of space (10 GB max per file) on OneDrive (Box.com was limited to 50 Gb of total space). All 1,800 campus users of Box must be moved no later than December 31, 2017.
- **Data feeds and application integrations:** The adoption of third-party Software-as-a-Service (SaaS) products continues to grow as IITS works with vendors to implement new services. Examples of new data integrations include Hobsons Radius, Briotix, ALMA, and Check I'm Here. IITS also incorporated significant updates to ten (10) other data feeds including Academic Partnerships, Accudemia, and JumpForward in addition to maintaining over ten (10) other data feeds including AIMS Parking, CSO CougarJobs, Maxient, and others.
- **Added Automation for Identity & Access Management:** IITS implemented a new product called *Manage Engine*, a system that improves online user support and account management functions. This application manages and automates account creation in Active Directory; the campus' primary identity/authentication service. IITS is continuing to utilize Microsoft's Azure Active Directory primarily for cloud redundancy.
- **Office 365 Free to Students** – In October 2016, in response to a TPAC meeting item forwarded by students, IITS worked with Microsoft to enable student access to MS cloud based Office365 as well as the full version of MS Office and access to OneDrive cloud storage. To date, 1,300 students have installed MS Office through this method.

University Wide Opportunities

- **Completion of the PeopleSoft Retooling:** This past Fiscal Year saw the completion of the PeopleSoft Retooling project; a sizable project including several units on campus. The project was completed in Fall 2017 and was approximately \$50k under budget. By way of background, the initial Purchase Order was for \$1,094,230, and during the course of the project the vendor was paid a total of \$1,041,276. After the project was completed, the remaining balance was released back to the unit budget as project savings.
- **Campus Website Updates:** When the new campus web design was released in summer 2016, there was a shift away from the multi-audience page to one that primarily suited the needs of prospective students and external visitors. This change resulted in CSUSM's internal audiences

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(faculty & staff) finding the pages less intuitive, and subsequently there was an approximate 86% reduction in traffic to the faculty/staff resources page. In response to feedback, a new option was added to the top of the CSUSM homepage that is clearly labeled “for faculty/staff” or “for students”. This is an example of how the campus website will continue to evolve in response to the needs of many campus community audiences. IITS will continue to look for ways to increase the usability of CSUSM pages for both internal and external audiences.

- **Campus Website Content Management:** For the past decade, the campus has used the *Cascade* as its web Content Management System. This year, based on feedback from web authors and review of available products, IITS chose a new content management and authoring system from *OU Campus*. This product was developed specifically for universities, and provides better support for shared content, ease of use, and streamlined website maintenance. This product was evaluated in Spring 2017 and is being developed to all campus websites over the Summer 2017 term.
- **Electronic Content Management:** There continues to be strong interest in the use of DocuSign’s eSignature workflow functionality. During the AY the ECM group worked with twelve (12) areas to develop fourteen (14) new forms that are actively in production. The adoption of electronic signatures has helped to reduce the amount of ‘lost’ paperwork with an online audit of authorized signatures on the documents. Document imaging with OnBase continues with Procurement fully implemented, HREO currently implementing, and the discovery phase initiated for the Academic Senate offices. The ePAN continued to roll out with incremental improvements throughout the year and HR continues to take the lead on promotion and training. University-wide rollout completion is expected by the summer of 2018.

System and Government Regulatory Compliance

- **PeopleSoft:** CSUSM is currently preparing for the PeopleSoft upgrade/split that will officially start in August 2017 with a go-live in March 2018. Other projects active during the year included functional improvements to Degree Planner, Schedule Assistant, and the Campus Community module as well as ongoing system briefings related to the common HR system (CHRS) project. CSUSM is better positioned for both the PeopleSoft upgrade/split and CHRS due to the work done to automate PeopleSoft security access requests and with the implementation of the role based access model for CMS. This new design enabled improvements for onboarding of faculty and staff.
- **Managing the Cloud:** CSUSM approved its first "Use of Third Party and Hosted Information Services" policy related to a campus audit requirement. This policy will help to ensure that campus information is stored only on approved cloud platforms and provides a structure for risk assessment of cloud and third party services prior to contract. The risk assessment process ensures that the campus understands the methods used to authenticate and access the cloud services and identifies any compliance related issues such as protected information storage and access.
- **Data Governance Committee:** A Data Governance committee was formed and is now charged with ensuring that there is a systematic approach to data information storage, sharing,

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reporting, and security privacy as well. Preliminary work was initiated on policies and procedures for organizational data authority and data standards policies and procedures.

- **Server Farm Firewall Upgrade:** Through funding from the Chancellor's Office, CSUSM's server firewall was upgraded to a new next-generation platform as part of the CSU CNI program. IITS also began implementing a micro-segmentation network design that allows for greatly increased security and higher fault tolerance for critical systems.
- **End User Networking Upgrade:** In addition to the firewall project, the CNI program also funded campus network infrastructure upgrades. In connection with this project, IITS deployed 142 switches over a 14 day period. These switches will provide Gigabit connectivity to all systems on campus, resulting in a faster experience for users and systems.
- **Single Sign-On (SSO) and Password support:** The use of SSO continued to grow as there were eight (8) new system connections configured this year. These projects included a new Admissions application, Qualtrics survey tool (noted earlier), and the online curriculum workflow application CurricuLog. The Shibboleth Identity Provider application was also upgraded to meet system compliance requirements.
- **Supporting University Police Department (UPD) and Parking:** IITS continued to build technical support for UPD and Parking services with a focus on becoming a trusted partner. Several major infrastructure improvements were done this year along with projects such as RIMS integration with GIS Maps.
- **Security Awareness & Training:** The Information Security Office continued the ongoing practice of participating in the nationwide "National Cybersecurity Awareness Month" by publishing weekly articles for the campus and hosted a "brown-bag" session on information security. This annual event uses materials provided by Educause and other organizations along with campus-developed articles relevant to our community.
- **Reducing Protected Level One Data in Dept Shares:** The Information Security Office continued the ongoing process of removing old and duplicate documents containing personal information. Some departments have met this task by voluntarily deleting content, and in other cases the InfoSec team has archived all documents older than four years and encrypted those that remained. Although CSUSM is making progress, there is still a significant amount of work to be done
- **Assessible Technology Initiative:** At CSUSM, faculty and staff are engaged on a daily basis in our shared effort and commitment to provide accessible instructional materials, website content, and technology-based services to everyone. This effort encompasses many partnerships with faculty and staff from across the university and is further supported through the collaborative efforts and work of Disability Support Services, Instructional & Information Technology Services (IITS), Library, and Procurement. During AY 16/17, the ATI Steering Committee met on a semi-annual basis to begin discussing accessibility issues in various campus areas and potential solutions. An important achievement was the funding of a full-time ATI Coordinator position for FY 17/18, in addition to the half-time ATI Instructional Materials Assistant hired by IITS. These positions will bring dedicated focus and effort to address areas where CSUSM could improve processes and formalize reporting practices. Additionally, the ATI Steering Committee, which

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includes administrative units and college representatives, will be working on implementing a risk based matrix utilized by other campuses within the CSU.

Unanticipated Opportunities for Advancing the Unit's and Division's Vision and Mission:

- **Dell EMC Storage Array:** After a series of technical glitches, IITS worked with Dell/EMC to provide a new solid state storage array to CSUSM at no cost to the campus. The value of this system exceeds \$100,000 and will allow IITS to push off additional storage costs for one to two budget cycles.
- **New Training & Conference Room:** Partnering with PDC, PASO/CAMP, and the Vice Provost, IITS was able to reassign IITS staff offices in order to create a new high-tech conference room and provide additional interim space for PASO/CAMP. Furthermore, this project also provided additional financial support to Events & Conference Services by reusing the table formerly in the McMahan House Library and assisting ECS with the funding for new flexible furniture for the McMahan House space.
- **Refresh of Craven 2nd Floor:** Working with Planning, Design & Construction, all public corridors were refreshed this past year, including some areas that had not seen fresh paint since the building was constructed. This was one of the more important environmental changes as the yearlong effort improved the aesthetics of the second floor of Craven. Working with PDC, all public corridors were refreshed this past year, including some areas that had not seen fresh paint since the building was constructed.
- **Technology Strategic Planning Effort:** The last campus technology strategic plan was published in 2011 and many of the innovations of that time are now commonplace. More broadly, the technology ecosystem is entering the age of digitalization, where processes will be developed natively for the digital world and are not simply paper processes converted to digital medium. These technologies not only change how we provide resources, but will also impact the services IITS runs on campus. To respond effectively, CSUSM will began a technology strategic process in Spring 2017 that will run through Spring 2018. IITS is in the Environmental Scan phase and is gathering input and trends from external and internal sources that will help to inform our process. Campus community engagement will begin in the Fall, with informational vignettes, divisional and college meetings, small group feedback sessions, and the formation of a Technology Strategic Plan Working Group. After several months of preparation with Team Leads, IITS held a two-day retreat on May 23rd and 24th where staff came together and shared in the first conversations that will undoubtedly impact the future.
- **Partnerships with Other CSU Campuses:** CSUSM entered into a Technical Account Manager agreement with Fresno and Humboldt in order to share costs for a premium service that the campus couldn't justify on its own. CSUSM will split the costs equally amongst the three campuses. This contract provides higher tier and active response level support critical to adopting Microsoft services. Additionally, IITS contracted with Fresno to provide on campus technical consulting and expertise to assist with Tableau dashboard development.