California State University San Marcos

Division of Academic Affairs
Strategic Planning and Budget Cycle
Three-Year Rolling Budget/Hiring Plan for FYs 16/17, 17/18 and 18/19
Part I: Narrative, Sections A and B

Subdivision Unit: _____ **IITS** _____

PART I: NARRATIVE

A. Planning Assumptions

1) **Common planning assumptions for all Academic Affairs subdivision units**
   a. 5% FTES growth at the university level for each of the three years, relative to 2014-15.
   b. Increasing funding for all three years, based on approximately 5% FTES growth per year.
   c. Unit plans should align with and support the Academic Affairs Strategic Plan Goals; namely:
       i. Develop an Academic Master Plan that focuses on programs relevant to our changing society and student demographics.
       ii. Employ pedagogies that are relevant to our changing society and student demographics.
       iii. Invigorate faculty and student research activities.
       iv. Cultivate global perspectives.
       v. Provide faculty and staff professional development.
       vi. Develop non-state funding sources.
       vii. Provide needed academic technology and library resources.
   d. Programs and units should remain focused on the future and take into account realistic growth projections and strategic priorities in the unit for the next three years.
   e. Program Review findings, if any, should be considered.
   f. Program proposals currently under review should be considered and reflected as appropriate if an implementation date is anticipated during the period of the three-year rolling plan.

2) *Begin here enumerating planning assumptions for the unit*

   a. **Technology as a Key Component for Innovative Instruction:** Faculty members will respond to the 21st century learner by developing pedagogy and teaching/learning models that use technology to help engage students. Technology will help to increase student learning outcomes by providing access to information and learning resources. Students will have access to learning materials anytime, anywhere, and from any device. Faculty demand for assistance in developing online learning tools will continue to grow. Transformed learning spaces will accommodate active learning environments and include lecture technologies with upgraded projection quality, wireless connectivity, and easy access from any device for faculty and students.

b. **Mobile First Strategy:** The increasingly pervasive use of smartphones has changed how faculty, staff, students, and prospective students access campus resources. If current trends continue, use of mobile devices to access campus websites will exceed that of desktop and laptop computers within the next three years. The use of mobile apps has dramatically changed how individuals expect to connect with both commercial enterprises and higher education. Similar to peer institutions across the CSU and higher education in general, the campus will move to a "mobile first" strategy that is anchored by a single campus app which is compelling and easy to use. This approach will enable an active, robust, and continuous connection to students and the broader campus community. A CSUSM smartphone app will facilitate access to campus educational resources, administrative services, communications, and promote engagement and performance.

c. **Technology Support:** The campus demand for all forms of technology support will continue to grow due to five factors: 1) increasing numbers of faculty, staff and students, 2) expectations of faculty and students for support after-hours and weekends, 3) centrality of technology to both the learning environment and campus administrative operations, 4) the rapid adoption of new services and systems utilizing "software-as-a-service", and 5) ever growing demand for information within the context of shortened timelines and the fast pace of change.

d. **Data Driven Decision Making:** Student success will be supported and enhanced through the insightful use of existing and new sources of data. Consolidation and acquisition of dispersed campus data sources will be necessary to provide coherent, cohesive, and consistent data to track and improve graduation rates, time to degree, and shrink the achievement gaps. Students will have access to tools that will help guide them to degree completion. Administrators will have access to data which will help to make decisions about how to allocate campus resources. Sophisticated visualization and self-service business intelligence tools will enable better data awareness and capabilities to promote student success and outreach. To promote timely graduation, tracking and trending models for future term course demand will assist in identifying bottleneck courses and provide projections of future enrollment in order to assist planning efforts and data to guide in the scheduling of adequate class sections.

e. **Cloud Computing and Online Services Changing Campus IT:** A shifting data center infrastructure, built upon cloud computing and the "as-a-service" model, will see a tremendous shift away from the current homogenous campus environment. The use of cloud and other off-campus hosted technologies will become the norm and create a hybrid infrastructure of campus systems. Critical campus resources that include authentication, web, and various in-house information systems will move to a redundant model that will interchangeably include on and off campus systems that are transparent to the user community.

f. **Retention and Development of IT Staff:** Technology infrastructure and system support will evolve from IITS as an internal provider to one of a service broker focused on consultation, integration, reporting, information security, and overall IT management. This change will drive evolving IT staffing requirements and create new opportunities for staff due to the dynamic nature of these new technology support paradigms. New skill sets must be developed to meet the needs of the University that

will require an ongoing training commitment to prepare staff for these new roles. Aligned with these changes will be the continuing need to provide appropriate salary adjustments associated with changing skill sets, experience levels, and regional economic factors.

g. **Partnership Opportunities:** Continued partnerships with growing expectations and new opportunities due to expanding services will be driven by Extended Learning, CSU Institute for Palliative Care, CSU system, University Student Union, student housing, grants, and other external units. Meeting the functional requirements of these areas will allow IITS to improve overall support to the campus community. Funding from these sources will support most, but not all, of the associated activities. System-wide agreements will promote commonality where appropriate and help to enable the campus to achieve fiscal savings.

h. **University Wide Opportunities:** To provide holistic service to University stakeholders, information must be shared across campus departments and divisions. In order to support efficient business practices and information sharing across the entire university, IITS will partner with units to deploy capabilities such as workflow (On-Base) and Customer Relationship Management (CRM). Recognizing the commodity nature of desktop technology, IITS will explore and deploy technologies that help to control costs associated with desktop computing, improve operational efficiencies, and effectively manage a robust user experience.

i. **System and Government Regulatory Compliance:** The CSU is committed to taking strong measures to protect the security of campus information assets, promoting the adoption of affordable learning materials, and deploying technologies that are equally accessible to all faculty, staff, and students. New policies from the CSU, regulations from the state, and federal governments will require the campus to create new operational methods and purchase new technology solutions for compliance. Failure to do so may violate state or federal law, and will result in not only audit findings, but fines and costs associated with addressing or mitigating failures and breaches. These efforts will require both technology and personnel resources in order to adequately comply with the requirements.

B. **Goals by Fiscal Year**
 1) **FY 2016/17 Goals**
   a) *Technology as a Key Component for Innovative Instruction:*
   i) **Emerging Academic Technologies –** When possible, fund faculty innovative technology ideas that could be used for instruction. Encourage and assist faculty members with innovative ideas.
   ii) **Faculty Center –** Support the Faculty Center's efforts to improve the quality of online learning by providing professional development to faculty for QOLT (Quality online learning and teaching) training. Support the Faculty Center's summer institute training for faculty.
   iii) **Learning Management System (LMS) –** Continue to provide high quality LMS support to faculty and students. Begin investigation of options for a next generation LMS. Key factors will include support for highly interactive content, mobile learning,

mobile app support, universal accessibility, and integrated social media and learning analytics for student self-assessment.

iv) **CALM Initiative –** In FY 15/16 CALM exceeded $1 million dollars in projected textbook savings. Continue assisting faculty in identifying OER resources that are saving students thousands of dollars on instructional materials. Partner with the Academic Senate, Library, and faculty to support the new AB 798 CA College Textbook Affordability Program.

v) **Classroom Technology –** Continue to enhance learning spaces with focus on flexibility and student engagement. Upgrade projection quality with new equipment and add wireless projection connectivity that enables access from any device for faculty and students.

vi) **Lecture Capture Capabilities –** Continue to outfit classrooms with technology to support the delivery of on-campus lectures to other classrooms to increase classroom capacity and to help interaction with remotely located students.

b) *Mobile First Strategy:*

i) **Deploy a Campus App –** Utilizing a mobile app framework, deploy the campus' first app targeted for use by current/prospective students, faculty/staff, alumni, and friends of the university.

ii) **Enable Baseline Functionality –** Enable all standard app functionality supported by the vendor including access to PeopleSoft for class registration, LMS access to Moodle, Library systems, push communications, and access to live video of campus events.

iii) **Partner with Athletics Program –** Utilize the campus app as a means to increase student engagement and support of the Athletics program as it completes its move to Division II and begins play in the new campus arena.

iv) **Promote Student Engagement -** Engage with various departments to develop strategies to utilize the app as a means to promote student engagement and increased access to campus services.

v) **Investigate Use of Beacons -** Deploy a limited test of beacons to evaluate use in support of student check-in to lab facilities and classes, advertisement opportunities for campus and community business partners, and student participation in academic and athletic events.

vi) **Investigate Use of App for On-Campus Purchases -** Partner with auxiliaries and vendors to evaluate options for using the campus app as a payment method.

c) *Technology Support:*

i) **Support Hours -** Continue expanded support hours established in FY 15/16 for the faculty/staff help desk and classroom support.

ii) **Technical Support Staff -** Due to ever increasing numbers of computers in classrooms, labs, and faculty/staff offices, increase the technical staff compliment in order to provide sufficient resources to meet the demands for additional technical support.

iii) **Operational Efficiencies -** Implement zero & low touch client management strategies to reduce staff time required to maintain desktop computers.

iv) **Deploy Windows 10 –** Windows 10 has established itself with the fastest adoption rate of any previous Windows OS. Deploy across student open labs and new faculty/staff PCs.

      v) **Online Learning –** Requests for assistance with LMS and online instructional tools has grown with the number of faculty and students. Evening and after-hours time periods are active with requests for service. Evaluate options for formalizing extended hours of support and evaluating the need for additional IDS staff.

  d) *Data Driven Decision Making:*

      i) **eAdvising-** With Degree Planner and Schedule Assistant in production, continue to promote their use by students, faculty, and staff advisors. Utilize data for student outreach to develop predictive models for course and section demand needed to facilitate time to graduation and student success.

      ii) **Business Intelligence (BI) –** Expand initial deployment of Tableau Dashboards to include an ever growing infrastructure of university data that supports sophisticated dashboards and the strategic use of data for improving student success and university operations.

      iii) **Data Warehouse –** Partner with Institutional Planning & Analysis and other units across campus to expand and extend the campus Data Warehouse as a coalesced source of student success information. Evaluate vendor solutions as appropriate.

  e) *Cloud Computing and Online Services Changing Campus IT:*

      i) **Initial Deployment of Campus Systems in Cloud –** Deploy instances of user authentication, campus website, and LMS in one or more cloud service providers in support of continuous campus operations.

      ii) **Software-as-a-Service –** Work with colleges and administrative units to identify hosted and software-as-a-service (SaaS) options to meet rapidly changing service requirements.

      iii) **IT Service Broker –** Create within IITS a unit dedicated to campus outreach, experimentation, and rapid deployment of SaaS and other service provider solutions. Build staff consultative service and third party application support team.

  f) *Retention and Development of IT Staff:*

      i) **Evolving Technology –** Look for staff growth opportunities with the rapidly changing technology delivery models created by mobile apps, third-party hosted systems, and cloud computing. Evaluate how these impact the current services provided by IITS and the new skills staff will be required to master.

      ii) **Staff Development –** Allow staff time to explore new technology through pilot projects and provide the ability to experiment with new ways of conducting business, allow for small scale trial and error, test innovative ideas and gain insights, and inform larger scale implementations. Utilize resource networks and attend regional conferences and training opportunities.

      iii) **Retention of Staff –** Provide appropriate and sustainable salary adjustments required to retain highly skilled staff as the loss of expertise is difficult to recover.

      iv) **Fill Director of Academic Technology Position –** The IDS and Media Services units have been without an incumbent in the director position for several years. The vacant MPP position has been utilized for salary savings to fund department operations, but the needs and expectations of faculty and student have highlighted the necessity for greater management involvement than is available with the current organizational structure.

  g) *Partnership Opportunities:*

i) **Campus Auxiliaries –** Partner with self-support areas to meet changing and expanding technology needs. These areas include Extended Learning, Auxiliary Services, CSU Institute for Palliative Care (IPC), grant and research needs. IPC in particular is growing rapidly and may soon reach a point where its technology requirements are beyond the scope, staffing capacity, and mission of the department.

ii) **Faculty Center –** Continue providing funds for the faculty fellow program which supports faculty learning communities, workshops and symposia.

iii) **CSU System –** Expand collaborative efforts with CSU system peers where appropriate to manage costs, share common solutions, and promote rapid adoption of best practices. Engage where appropriate on the current CHRS project and future Student System developments.

iv) **Colleges –** Develop opportunities with innovative faculty who want to use technology to increase student engagement.

h) *University Wide Opportunities:*

i) **5 Year IT Strategic Plan-** The current IITS strategic plan ran through 2015. IITS will engage the executive leadership, academic partners, and broader campus community in a long term strategic planning process to develop an updated five-year plan.

ii) **Electronic Workflow & Document Management –** Build upon early successes within Human Resources and Enrollment Management Services to expand the use of electronic workflow and document management. Using the campus' existing document management system, utilize workflow to create paperless approval processes that improve the accuracy, timeliness and ability to track core documents across departments.

iii) **Identity & Access Management –** Identity management is key to the entire IT infrastructure. The ability to provision employees, students, and temporary users in a timely fashion is essential in order to grant access and perform almost any task on campus. This initiative will investigate, purchase, and begin the early deployment of a commercial Identity and Access Management solution in 2017 that will replace the current in-house hybrid solution.

iv) **Data Governance Committee -** Collaborate with the cross divisional Data Governance Committee to help prioritize data collection and reporting needs for the campus. Grow the Data Warehouse into a robust and consolidated repository of university data.

v) **Training –** Support the campus wide training system called "Employee Training Center" (ETC). Continue faculty training opportunities including TULIP, OER, and Quality Online Learning and Teaching (QOLT).

vi) **CRM –** Work with campus constituents to plan and implement a true Customer Relationship Management (CRM) system to help facilitate a more holistic view of our campus community.

vii) **Virtual Desktop Infrastructure (VDI) -** Complete evaluation of effectiveness, support and costs related to deploying a VDI infrastructure. If appropriate, begin limited deployment to users in identified populations and use case scenarios.

i) *System and Government Regulatory Compliance:*

i) **Security & Compliance -** Investigate the implementation of a two-factor authentication system. Implement a PCI and systems penetration testing regime.

Address issues related to storage of protected information by widely implementing encryption for data at rest. Implement required incident analysis and log management tools. Implement risk management functions for required compliance.

ii) **Training** – Continue IT security awareness training for the campus community. Focus efforts on employees who handle protected information.

iii) **ATI Steering Committee** – Engage the ATI Steering Committee in an increased level of activity to guide and build upon efforts across campus to promote the use of accessible technology.

iv) **ATI Coordinator** – Establish an ATI Coordinator role with a singular focus on supporting faculty and students in creating and utilizing accessible resources and working with campus units to fully evaluate all IT purchases for accessibility.

2) **FY 2017/18 Goals –** *Tentative goals for this fiscal year will be impacted by IITS Strategic Plan update in 2016.*
   a) *Technology as a Key Component for Innovative Instruction:*
      i) **Learning Management System (LMS)** – If an appropriate solution is identified, begin implementation of an updated on-campus or hosted LMS that supports highly interactive content, mobile learning, and integrated social media and learning analytics for student self-assessment. This effort will span multiple years as faculty begin to utilize the new system.
      ii) **CALM Initiative –** Continue successful efforts to assist faculty in identifying OER resources.
      iii) **Classroom Technology** - Continue "Year 3" of the classroom upgrade project to deploy new projection equipment and add wireless projection connectivity.
   b) *Mobile First Strategy:*
      i) **Expanding Beyond Basic Functionality** – With the campus app in its second year of adoption, look for opportunities to build campus specific customizations and unique uses.
      ii) **Promote Student Engagement** – Continue work to build student adoption and use of the campus app. Work with campus partners to utilize the app as a means to promote student engagement and services.
      iii) **App Facilitating Campus Transactions** – Use of beacons has expanded to provide appointment check-in and location identification services. Partner auxiliaries and vendors are beginning to use the app as a means of payment. Increase the delivery of MyCSUSM functionality in a mobile friendly format.
   c) *Technology Support:*
      i) **Support Hours –** Evaluate formal weekend support hours for faculty and students.
      ii) **Operational Efficiencies -** Client management strategies have reduced staff time required to maintain desktop computers.
      iii) **Deploy Windows 10 -** Windows 10 has been deployed across all faculty, staff, and student Windows-based personal computers.
      iv) **Virtual Desktop Infrastructure (VDI)** – VDI in use within a growing user population.
      v) **On-Line Learning –** After-hours support formalized.

    d) Data Driven Decision Making:

        i) **eAdvising –** With Degree Planner and Schedule Assistant widely used by students, faculty, and staff advisors. Data is highly predictive and used to provide a more accurate plan for student course and section demand.

        ii) **Business Intelligence (BI) –** Tableau Dashboards provide a clear and consistent view of campus data. Dashboards and other tools are utilized to effectively engage and provide assistance to students.

        iii) **Data Warehouse** – Data islands on campus have been eliminated and new information systems and services are integrated into the Data Warehouse at implementation.

    e) Cloud Computing and Online Services Changing Campus IT:

        i) **Campus Systems Operate in Hybrid Model** – After moving critical campus systems to the cloud for redundancy, all critical campus systems operate in a robust and hybrid infrastructure of on-campus and cloud based operations. Evaluate options for refresh or replacement of aging technology infrastructure.

        ii) **Software-as-a-Service** – Software-as-a-service (SaaS) adoption continues to grow across campus.

        iii) **IT Service Broker** – IITS unit is fully operational with proactive and consultative services to campus units and a third party application support team assisting operating units to manage their use of SaaS and secure management of data.

    f) Retention and Development of IT Staff:

        i) **Staff Development –** IITS' organizational structure continues to evolve to meet changing service and technology requirements. New staff opportunities are created as needed to accomplish the goals of the updated IT Strategic Plan.

    g) Partnership Opportunities:

        i) **CSU System** – Earliest possible implementation of CHRS system begins for CSUSM. CSUSM is engaged in discussions of successor to current Student Information System.

    h) University Wide Opportunities:

        i) **Electronic Workflow & Document Management –** Campus is continuing to adopt electronic work flows. Use of paper documents significantly reduced.

        ii) **Identity & Access Management –** Identity and Access Management (IAM) solution implemented. Increased automation of campus user account management allows for the creation of new users accounts within 24 hours.

        iii) **CRM –** Campus Customer Relationship Management (CRM) system implemented and reports are in place to provide a comprehensive view of faculty, student and community engagement.

        iv) **Phone System Replacement –** Campus begins configuration and purchase of a new campus phone system.

    i) System and government Regulatory Compliance:

        i) **Security & Compliance –** Investigate the implementation of a two-factor authentication system. Implement a PCI and systems penetration testing regime.

        ii) **Training** – Continue IT security awareness training for the campus community.

3) **FY 2018/19 Goals** – *Tentative goals for this fiscal year will be impacted by the IITS Strategic Plan update in 2016.*

   a) *Technology as a Key Component for Innovative Instruction:*

      i) **Classroom Technology** - Continue "Year 4" of the classroom upgrade project to deploy new projection equipment and add wireless projection connectivity.

   b) *Mobile First Strategy*

      i) **Campus App Widely Adopted** – Campus app is widely used in campus offices for student scheduling.

      ii) **Promote Student Engagement** – Continue work to build student adoption and use of the campus app. Work with campus partners to build custom app add-on functionality that fully utilizes the platform as a means connecting to the campus and interacting with campus services.

      iii) **App Facilitating Campus Transactions** – Campus app is used for payment across campus. Continue to increase the delivery MyCSUSM functionality in a mobile friendly format.

   c) *Technology Support:*

      i) **Support Hours –** Evaluate and implement if data supports formal Help Desk and IDS staff hours for faculty and students on weekends.

      ii) **Virtual Desktop Infrastructure (VDI)** – VDI in use within a growing user population.

   d) *Data Driven Decision Making:*

      i) **eAdvising –** Continue to make available the course and section demand data to further assist campus units to identify bottlenecks in course offerings.

      ii) **Business Intelligence (BI) –** Explore ways to use predictive analytics to assist in the data driven decisions serving the right information at the right time. A variety of departments will have the ability to view "at-a-glance" visualizations to track the progress of their desired core metrics.

      iii) **Data Warehouse** – Begin effort to update the Data Warehouse to include the data from the CHRS implementation.

   e) *Cloud Computing and Online Services Changing Campus IT:*

      i) **Campus Systems Operate in Hybrid Model** – Campus systems operate in hybrid infrastructure of on-campus and cloud based operations. Existing campus infrastructure (i.e., data storage, load balancer) will reach end-of-life and require refresh.

      ii) **Software-as-a-Service** – Software-as-a-service (SaaS) has become the norm for most new systems. IITS provides quick time to implementation and integration.

      iii) **IT Service Broker** – IITS has developed a strong organization with consultative services ready to support the campus units as the use of IT products and services continues to evolve in new and sometimes unexpected ways.

   f) *Partnership Opportunities:*

      i) **CSU System** – Implementation of CHRS system begins (or continues) for CSUSM.

   g) *University Wide Opportunities:*

      i) **Electronic Workflow & Document Management –** Campus is standardizing on electronic work flows and the use of paper documents have been significantly reduced.

      ii) **Identity & Access Management –** Identity and Access Management solution implemented and automation of campus user accounts refined in order to support a role based access model.

      iii) **CRM –** Campus Customer Relationship Management (CRM) system widely adopted. Communication to campus constituents improved with consistent, non-duplicative information.

      iv) **Phone System Replacement –** Campus completes the implementation of VOIP phone system.

h) *System and Government Regulatory Compliance:*

      i) **Security & Compliance –** Deploy use of a two-factor authentication system for appropriate applications. Implement a PCI and systems penetration testing regime.

      ii) **Training** – Continue IT security awareness training for the campus community.