California State University San Marcos

Division of Academic Affairs
Strategic Planning and Budget Cycle
Three-Year Rolling Budget/Hiring Plan for FYs 20/21, 21/22 and 22/23
Part I: Narrative, Sections A and B

Subdivision Unit: Instructional & Information Technology Services

PART I: NARRATIVE

A. Goals by Fiscal Year
 1) FY 2020/21 Goals

Assumption #1: Implementing the Unified Technology Strategic Plan (TSP): IITS will continue work on approved strategic initiatives from the 2018 IITS Unified Technology Strategic Plan (TSP), which guides the vision, mission, and strategic direction of IT at CSUSM. The Information Management Steering Committee (IMSC) has prioritized specific strategic initiatives from this strategic plan.

 Assumption 1a) Constituent Relationship Management (CRM): In 2019, CSUSM commenced a limited adoption of Salesforce CRM in partnership with Community Engagement, Enrollment Management Services, and Extended Learning. Given the campus' increasing focus on student success and data-driven decisions, in conjunction with the lack of a tool that allows for consolidating data from the numerous student touchpoints, IITS anticipates a CRM to become a core element of student success initiatives. Therefore, IITS anticipates the Salesforce project to expand in FY 20/21.

 Assumption 1b) Unified Communications System: In FY 19/20, CSUSM continued to both modernize the campus' 20+ year-old phone system and adopt new methods of engaging students, such as the Chatbot and opt-in communication channels in the Campus App. Specific to the phone system, IITS deployed new VoIP phones in the new Extended Learning Building and Viasat Engineering Pavilion and purchased an Automated Call Distribution System to add new capabilities to and streamline call handling. In FY 20/21 IITS expects this effort to continue growing as the campus responds to student need for and expectation of more targeted and personalized communications tools.

 Assumption 1c) eOne Card System: The eOneCard system will be in place by Summer 2020 and will support campus ID, student & voluntary meal plans (with CSUSM Corp & Sodexo) and create additional opportunities for future security-related applications. CSUSM initiated the eOneCard System in late 2019 in conjunction with campus vendors .This card system will utilize Apple Wallet and Google Pay capabilities, limiting the need for physical cards and deploying a unified platform that can expand beyond the initial dining/retail functions to support attendance tracking and door access, if selected at a future date.

 Assumption 1d) Faculty Research / Learning Environments: CSUSM will continue to support faculty research, new learning environments, and services through new technologies and innovative uses of physical and digital space. Growing research grants and

changes in pedagogy will require additional technology resources that address changing in-class and online learning content delivery and expectations. In response to these changes and as part of the Technology Strategic Plan, in FY 19/20 CSUSM deployed the latest in instructional technology in the Extended Learning Building and Viasat Engineering Pavilion. Additionally, IITS re-imagined the former media production studios and deployed new Virtual Reality technology that is supporting faculty instruction and student projects in computer science and other fields such as Arts, Media, and Design. These new learning spaces have created additional opportunities for faculty to explore cutting edge pedagogical approaches. Over the next three summers, IITS anticipates bringing these technologies to classrooms across campus. Additionally, IITS continues to collaborate with faculty on numerous research projects. In support of faculty research and responding to an existing need, IITS is proposing to reuse rack space in the campus' Data Center that is no longer required by IITS to establish a dedicated place to host a growing number of faculty research systems.

Assumption 1e) Digitization/Electronic Workflow. IITS is continuing to work with units across campus as they are rethinking current signature processes and moving to electronic document formats. CSUSM has been actively adopting electronic signature, even though those efforts were disrupted by the need to redirect efforts in support of the shift from DocuSign to Adobe Sign (for financial reasons). In Fall 2019, CSUSM undertook the major effort to recreate the campus' extensive existing library of electronic documents into Adobe Sign forms. Working with a significantly different platform and a tight timeline, IITS successfully converted over xxx electronic forms. As of this document, over xxx new eforms have been created in the new platform, including a new campus-wide travel authorization form. As the new platform stabilizes, IITS foresees a need and an opportunity to collaborate with campus units to not only convert paper forms to electronic but also develop efficient, online, and mobile friendly processes appropriate to the digital world.

Assumption #2: Stable Technology Funding with Rising Costs: IITS expects the cost of technology to continue rising with funding remaining level. After four years of fiscal rebuilding, in FY 19/20 IITS stabilized at a level that covers existing operational costs; however, the unit continues to rely fully on employee salary savings to fund projects. Campus-wide IT operational costs, as well as the expenses for approved projects, utilize all O&E funding in addition to one-time dollars. IITS' priority is to have one to two years of budgetary stabilization to properly operationalize new projects and standardize procedures. IITS continues to rely on strategies such as reassigning personnel resources, cutting software licensing, terminating professional services contracts, deferring purchases, and denying technology requests. The high number of staff vacancies (see Assumption #3) has had an unexpected positive campus impact, as the one-time dollars funded all the Technology Strategic Plan projects listed (see Assumption #1). While the campus has continued its overall growth in both faculty and staff positions, the number of IT support staff has actually declined. For example, in FY 15/16, IITS had a total compliment of 92 positions, while in the current fiscal year, IITS is operating with 89 active positions. The same is true of funding. After peaking at $12.5 million in FY 14/15, IITS' actual operational spending dropped 20% to just over $8.5 million in FY 16/17 and is currently around $11.7 million in FY 19/20. IITS had historically been known for its ability to fund projects and

research technology, and while the unit has resumed this support, it is using one-time salary dollars to do so.

Assumption 2a) <u>**Necessary Funding for Technology Refresh Program (TRP)**</u> The biggest bright spot in the IITS budget is that currently the TRP is fully funded at $1.35 million; this amount should meet projected faculty and staff refresh units and associated costs for the current four-year cycle. As of FY 20/21, all computer equipment in classrooms, labs, and conference rooms have returned to the scheduled four-year replacement schedule. IITS continues to provide a strong compliment of computer options for faculty and staff, though a significant number of users continue to pay for one-time upgrades to the standard compliment. One area of funding concern remains, as some specialized lab computers and the majority of conference room equipment across campus has not been assigned to the program due to certain requirements. With this funding in question, IITS is using one-time dollars to replace equipment for departments on an as-needed basis.

Assumption 2b) <u>**Chargeback Model**</u>: After several years of effort, IITS is still working to realign the very complex chargeback model established over several decades. While most General Fund charges were removed in the last two budget years, IITS also continues to charge Auxiliary Units for services consistent with CSU policy. On the General Fund side, there remains a high number of transactions to cover equipment not on the TRP, as well as the cost of upgrades. In terms of a source of funding, chargebacks remain a central element of IITS funding at just under $1.35 million in FY 19/20. Feedback from campus units would like all equipment, regardless of its use to be added to the TRP in order to further reduce chargebacks to departments. The TRP currently limits support to one computer for all faculty/staff as well as classrooms/labs. All other equipment (i.e. conference rooms, student assistant stations, and 2nd computers) are covered by the unit requesting the equipment. IITS is also operating on a number of outdated programs that currently track chargebacks. In FY 20/21 IITS anticipates moving to Service Now, an industry standard platform for IT service management.

Assumption #3: <u>**Continuing Staff Retention Challenges**</u>: The loss in staff/skills continues to be an area of major concern that greatly impacts IITS' ability to meet the campus' expectations. Given the strong local employment market for skilled technology professionals, IITS continues to lack a long-term answer to the departure of highly skilled staff members. While the number of staff departures has declined in FY 19/20, the ability to recruit strong, job-ready candidates has actually diminished. Consequently, the ongoing difficulties in both retention and recruitment have resulted in IITS operating with a shrinking number of critical staff. These staffing concerns are affecting IT support and project plans. Though IITS has implemented multiple IRPs, the department continues to operate below a full staff complement so it can utilize salary savings to fund prior year increases. In FY 20/21, IITS does not project any large-scale IRP plans as has been the case in prior years.

Assumption 3a) <u>**Competitive Salaries Required**</u>: The strong IT employment pattern outside the university will continue for the foreseeable future, which in turn requires IITS to meet market salaries for highly skilled IT staff. IITS has a small group of employees with

important and highly valued technical skills, many of whom now find their abilities in great demand by local employers. While these employees are overall satisfied at CSUSM, lower salaries, slower salary growth, and limited positional advancement lead them to consider the possibilities of employment outside the university. The cost of replacing these key employees is large, and the replacement employees often require significant training investment. Therefore, allowing those key employees who possess critical skills to depart due to inadequate salary ranges is not cost effective.

Assumption 3b) <u>Overwhelming Workload Creates Vulnerabilities</u>**:** As was the case in prior years, the workload for employees with critical skills remains high and is projected to increase. In response, the campus will look to shift some services to a hosted/cloud environment to address operational issues. There is a continued need and requirement to provide evening and weekend support that exceeds current staff availability. Given the ongoing recruitment and retention challenges, IITS has been unable to make progress on workload vulnerabilities. Highly skilled employees remark on their intense workloads, yet the department lacks the staff needed to ensure that at least two employees possess the expertise necessary for core campus technology services.

Assumption 3c) <u>Recruitment Difficulties</u>**:** Demand for technology workers will remain high and new hires to CSUSM will require competitive salaries or significant training. The local technology employment marketplace does not favor CSUSM and people with appropriate technology skills often do not apply to CSU San Marcos due to our low salary range. Reshuffling staff has also been a common occurrence, however moving IITS staff internally creates vacancies in other areas which impacts IITS' ability to provide services and leads to the burn out of existing staff.

Assumption #4: <u>Technology and Expectations Will Continually Evolve</u>**:** Students will expect services uniquely suited to their academic and service needs while staff and faculty will expect unobtrusive technology solutions that positively impact their workflows. Shifting technology expectations and perceived needs have units across campus pushing for new applications and services that meet the demands of students, faculty, and staff. IITS is encouraged by the numerous technology-supported initiatives and will continue its mission of deploying and supporting the capabilities necessary to increase the campus' efficiency and productivity.   As outlined in the 2018 campus Technology Strategic Plan, technology is a defining cultural actor, shaping perspectives, changing life experiences, and shifting expectations. Therefore, IITS expects an ever-increasing load, as the campus continues to initiate technology projects in support of the campus community.

4a) <u>Expanded Campus Service Hours and Capabilities</u>**:** IITS expects a growing need for support outside regular business hours, a need also identified in the campus' technology strategic planning process. Feedback from faculty, staff, and students have indicated the desire and need for support during evening class session hours. Faculty, staff, and students also expect IITS to extend support hours into weekends, provide additional self-help options, and enhance outreach/communications. Furthermore, faculty and students' learning-related interactions increasingly extend outside normal operating hours, which

requires IT support to follow suite as it fulfills its mission of supporting teaching and learning whenever that takes place.

4b) Increased Communication Expectations: As technology initiatives necessarily transform existing workflows and protocols, IITS expects increased workload related to communicating these changes to the campus community. Despite IITS' communication efforts, such as a new project status page, service alerts, and service catalog, the challenge remains to effectively convey information to faculty and staff. This pattern is expected to be repeated as the campus adopts other systems that disrupt existing products and uses, which will require IITS to devote a more concerted effort to communicating these changes.

Assumption #5: Sustaining Technology Infrastructure in a Hybrid Environment: The campus IT infrastructure will continue its shift towards a blended environment of Cloud/Software-as-a-Service (SaaS) offerings as well as updated on-campus technology and residual infrastructure will need to be supported. While IITS begins deploying new technologies and services outlined in the Technology Strategic Plan (Assumption #1), the unit will continue to realign on-premise services, adjust operational procedures, and identify funding strategies to support evolving IT environments.

5a) Deferred Infrastructure Investments: Without adequate replacement or migration to other service providers, older technology equipment will fail, causing outages and potentially disrupting campus operations. As a further point of reference, none of the IITS funding requests for infrastructure in FY 19/20 were appropriated. IITS has internally resumed investment in some of the campus' aging Data Center technologies, defraying the cost through salary and other cost savings. Since IT infrastructure is critical to smooth campus operations, funding needs to replace aging equipment with updated systems will have to come from whatever sources are available including savings from the elimination of services.

5b) Increasing IT Costs: IT hardware, software, and hosted services costs will continue to see annual increases for the foreseeable future. Partly driven by strong economic conditions, IT companies have been applying significant price increases and this trend will most probably continue. Similar to last year, IITS continues to see increasing technology costs on almost all maintenance contracts for supported hardware and software products, with many service renewals seeing annual increases as high as 15%-30%. Changing IT service models from one-time purchase to annual licensing will also increase costs.

5c) System & Regulatory Compliance: *Increasing number of compliance requirements will continue to create additional operational requirements, new systems, and added staff responsibilities.* CSUSM is committed to protecting the security and privacy of campus information assets, as well as deploying technologies accessible to all. In particular, in 2019 campus' developed multi-year plans to adjust operational practices in response to increased system level expectations. Compliance with new CSU policies is also focused on information security which will require the campus to adopt new technology solutions and assign appropriate staffing.

2) FY 2020/21 Goals

a. *List here specific goals for the Unit Assumptions enumerated above (e.g., identify which "assumption" the goal supports).*

Operationalize eOneCard ID & Meal Plan Services (Assumptions: 1, 1e, 4, 4a, 4b, 4c, 6, 6b) – Deployment of the Transact eOneCard system will occur between January and August 2020. Incoming students, and all others who wish to participate, will be included in the original group utilizing the system and mobile credentials (Apple & Google wallet functionality). Establishment of basic card printing operations, mobile integration, and startup partnered with CSUSM Corp, Student Financial Services, and Sodexo. *Strategic Plan Alignment: 1.1, 1.2, 2.1, 3.1, 4.2, 5.1*

Phase I of Constituent Relationship Management (CRM) (Assumptions: 1, 1d, 4, 4a, 4c) – IITS established the Salesforce instance and has deployed basic CRM support for Student Affairs, Extended Learning and Community Engagement pilot projects. Phase I, as proposed, would develop additional CRM instances and add case management focused on units in Cougar Central. *Strategic Plan Alignment: 1.1, 2.2, 2.3, 3.1, 4.2, 5.1, 5.3, 6.3, 71., 7.2, 7.3, 8.1, 8.3*

Phase Out PointSpan System (Assumptions: 1, 1a, 1c, 3, 3a, 3b, 3c, 3d, 6a) To date, CSUSM has deployed 294 VoIP phones (180 of which in the Extended Learning Building). As the existing PointSpan phone system is no longer supported by the original manufacturer, IITS plans to deploy approximately 1,200 phones and fully shut down the existing system. IITS will also complete the deployment of an updated contact center capable of sophisticated call handling, virtual queueing, and system interactions. *Strategic Plan Alignment: 1.1, 1.2, 1.3, 3.1, 4.1, 4.2, 5.1, 5.3, 6.3*

Ongoing Adoption of a Hybrid Computing Environment (Assumptions: 3, 3a, 3b, 3c, 3d, 4, 4b, 4c, 5, 5a, 5b, 6, 6a, 6b) – Systems like the new Transact eOneCard will be provided within a SaaS environment. IITS will continue to identify opportunities for improving service using hosted applications based on cost, performance, and opportunity. IITS has put on hold the move of the Learning Management System to a hosted solution pending budget stability. With funding identified, Cougar Courses will be the next application to move to the cloud. *Strategic Plan Alignment: 1.1, 1.2, 1.3, 4.2, 7.2, 8.1*

Expand Digitalization/Electronic Workflow (Assumptions: 1, 1b, 4, 4a, 4b, 4c) – In FY 19/20 CSUSM completed the move from DocuSign to Adobe Sign, saving tens of thousands of dollars in licensing fees. New forms continue to become available, including the CSUSM travel authorization form. In FY 20/21, IITS will be actively working with campus functional units to help rethink processes and shift forms to a digital platform. *Strategic Plan Alignment: 1.1, 1.2, 1.3, 2.2, 3.1, 4.2, 5.1, 6.3, 7.2, 8.1*

Enterprise-wide Multi-Factor Authentication (MFA) and Single-Sign On (SSO) (Assumptions: 4, 4a, 4b, 4c, 5, 5a, 5b, 5c, 6, 6a, 6b, 6c) – MFA and SSO technologies have long been available, and many CSU campuses have taken advantage of these capabilities to both strengthen security and streamline the user experience. A major priority will be rolling out MFA

to all campus community members. This goal is both a requirement for eOneCard and also addresses the weakness inherent in password-only strategies. The use of SSO will also save users time as authentication on the local computer system will allow the user to pass seamlessly into various campus applications, including PeopleSoft. The use of SSO will also improve student access to campus resources by enabling seamless access to campus systems via the Campus App. *Strategic Plan Alignment: 1.1, 1.2, 2.1, .4.2, 5.1, 6.3, 7.2, 8.1, 8.2*

Updating Classroom Learning Technologies (Assumptions: 1, 5, 5a, 5b, 5c) – During Fall 2019, IITS introduced a new mobile lift-table lectern and the interactive Dell Canvas technology in over 25 classrooms of the Extended Learning Building and Viasat Engineering Pavilion. Over the next three to four years, IITS will undertake the modernization of existing classrooms through the annual investment of approximately $250,000 in classroom technology funds. Additionally, Academic Technology had a very successful year collaborating with faculty who taught in the new Inspiration Studios facilities using AR/VR technologies. From computer sciences to the arts, these spaces provided students with hands-on experiences with the latest technologies. *Strategic Plan Alignment: 1.2, 3.2, 3.3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1*

3) FY 2022/23 & 2023/24 Goals

As most of the projects listed in Item #2 a multiyear, many of the projects will continue to be active. Specific <u>new</u> goals beyond those listed for FY 20/21 have not been identified as of the date of this report.