California State University San Marcos

Division of Academic Affairs
Strategic Planning and Budget Cycle
Three-Year Rolling Budget/Hiring Plan for FYs 21/22, 22/23 and 23/24
Part I: Narrative, Sections A and B

Subdivision Unit: Instructional & Information Technology Services

<u>PART I: NARRATIVE</u>

❖ **Planning Assumptions for the Unit:**

Over the past twelve months we have witnessed homes becoming virtual offices and spaces of instruction and learning, new collaboration technologies being adopted at an unprecedented pace, and new challenges and expectations arise. This time has also revealed higher education's increasing dependency upon technology and the inextricable link between technology and the success of both our learning and administrative functions. All evidence points to an even further reliance on technological solutions and to the clear need for strategic partnership with IITS as conversations and plans are made that will plot CSUSM's future course.

As we look to the future, much can be learned from our abrupt transition from a primarily physical campus to a virtual one. This rapid shift quickly revealed that some of our existing tools—built to primarily serve a physical campus—had inherent limitations, while those technologies that could serve a virtual or hybrid campus were underutilized. The transition was challenging yet successful and, in many ways, established new norms that none could have expected last March. At a minimum, this unprecedented moment is an opportunity to chart a strategic direction where technology no longer binds the campus community to physical classrooms and offices but, rather, enables a mixed in-person and remote work environment with flexible movement of people and information between physical and virtual spaces. As higher education looks to purposefully adapt to the rapid and ongoing changes, IITS has aligned our plans to the goals of creating a flexible, adaptable, innovative campus that strives for digital equity.

A. **Flexible Technologies that Enable Mixed In-Person and Remote Environments**

1. **Addressing the Digital Divide Beyond COVID-19** – Nothing revealed the campus' dependency upon access to current generation technology more than last spring's huge undertaking, when CSUSM moved to quickly repurpose equipment from classrooms and labs and loan it to every faculty, staff, and student who requested it. These actions were taken so that instruction and administrative work could continue uninterrupted despite the shift to virtual, but the work has continued unabated for a year as COVID-19 shed light on the

long-standing reality of the digital divide within CSUSM's population. We witnessed significant equity issues, with inadequate access to a good laptop and internet connectivity directly impacting the teaching and learning for a sizable number of students and lecturer faculty. These issues were highlighted by the fact that CSUSM provided almost 1,000 laptops, 250 hotspots, and over 850 other technology items to members of the campus community. This was and continues to be a practice necessary for instructional and learning equity. However, this is also a new approach that has not been part of IITS' support model until 2020. It is assumed that going forward IITS' support strategy will continue to include this expanded support. Assuming the campus elects to maintain this model, the costs will continue to be substantial and cannot be sustained by IITS without budgetary supplementation. For example, IITS received $930,000 in COVID-19 one-time funds to purchase loaner computers and currently spends approximately $11,000 per month on wireless hotspot costs. IITS assumes that the additional equipment and ongoing free wireless hotspot services will continue for current and new students as well as lecturers and other faculty/staff who require equipment. Assuming this is the case, it is difficult to accurately project costs given the shifting environment, with current estimates for this support running between $300,000 to $500,000 depending upon demand.

2. **Aligning Technology Refresh Program (TRP) to New Paradigms –** For decades the TRP has provided for the scheduled refresh of technology built around a basic model of desktop computers for staff and laptops for faculty. After a hiatus to repay millions in program debt, the program was restarted in 2017 based upon a $1,400 per unit allocation per individual. This model was further subsidized by IITS one-time funds used to cover the cost of faculty laptop configurations that often exceeded the allocation. If CSUSM moves to a more flexible work location strategy, additional costs will be incurred to purchase higher-cost laptops for all staff as well as related equipment to support both home and on-campus offices. IITS is planning with the assumption that CSUSM will institute some form of flexible office environment. This model will create significant increases in computer equipment cost and additional support and connectivity implications that will likely involve increased support costs in a distributed environment. Preliminary estimates indicate a new baseline cost for computer environment would increase the allocation to $2,200 for staff and $3,400 for faculty. Currently, IITS is proceeding with the FY 20/21 faculty refresh but is holding on most staff equipment refreshes pending the campus' direction regarding a post-COVID-19 work environment.

3. **Creating Flexible Instructional Spaces** – As we look to reactivate classrooms and labs, IITS is examining ways to create flexible instructional spaces that offer faculty a range of pedagogical capabilities for teaching students in the classroom and at home. As part of this approach, IITS is looking to build upon the technologies introduced in 2019 in the Extended Learning and ViaSat

Engineering Pavilion classrooms. These rooms offered new technology options such as digital whiteboard capabilities, mobile lecterns, and informal collaboration technologies. CSUSM will enhance classroom spaces by adding improved video conferencing and audio/visual capabilities for mixed instruction formats while maintaining ease of use and a low technology barrier. IITS anticipates additional costs of up to $10,000 per classroom to expand the range of instructional capabilities, which will come from the second round of COVID-19 federal funding.

4. **Increased Need for Training on Instructional & Digital Collaboration Technologies** – Throughout this past year CSUSM has provided basic instructional technology to support all instructors; however, student feedback has highlighted significant training gaps related to the use of virtual instruction tools and related instructional approaches. Training opportunities exist for improved use of video conferencing and, especially, digital collaboration tools. Given the expectation that video conferencing and collaboration tools will continue to be an essential part of instruction, IITS is assuming that additional support and training (in partnership with the Faculty Center) will be required. Additionally, long term adoption of virtual and hybrid instruction and administrative work should also be accompanied by training on improving home office/instructional spaces, such as how to provide higher quality audio/visual content, utilize digital whiteboard technologies, and adopt additional collaboration tools. All these elements will be an essential part of faculty and staff professional development to enhance remote instruction and work practices.

B. Building Student Success Through Integrated Campus Solutions

5. **Supporting Student Success by Removing Information Silos** – Information about CSUSM's constituents (students, staff, faculty, alumni, and external partners) currently resides in data silos across multiple databases and software platforms in numerous offices and divisions. This is partly a result of a decentralized support model, where units utilize multiple software tools, built around in-person delivery of services. When supporting students, CSUSM's staff and faculty often lack awareness of other student support and outreach efforts. This fragmented view of students hinders the creation of sustained relationships and reduces our ability to holistically support students. A Constituent Relationship Management (CRM) platform, such as Salesforce, at its core offers a single, highly customizable common system that contains all available student information. CRMs are utilized to manage this information and provide seamless, coordinated, and consistent personalized student support and communications while seeking to avoid duplication of effort and to consolidate resources. Over the past year CSUSM has been utilizing Salesforce in several offices, including the Office of Success Coaching. The campus is looking

to increase adoption, and we are in the process of expanding Salesforce's use to support outreach and recruitment efforts as well as use by units in Cougar Central. As part of plans to expand adoption, IITS is also working with campus leadership to deploy Advisor Link and a student community, which can provide a common portal that can modernize and better coordinate student support and success efforts. Currently IITS expends approximately $63,000 per year to support Salesforce licensing and estimates an additional $260,000 per year will be needed for platform licensing alone to support the expansion efforts. Growth of this platform will also require one to two additional technical support positions over time to keep pace with adoption and the related support requirements of the expanding user base.

6. **Uniting the Campus Community on a Common Office Suite Platform** – One important learning and collaboration challenge that has become even more apparent this past year is the way our campus community is split over two platforms, Microsoft and Google; faculty and staff on one side and students on the other. Students have been primarily utilizing Google tools since 2007/08, which often creates challenges when they try to utilize the Microsoft tools faculty and staff are using (Teams, SharePoint, OneDrive, etc.). The widespread adoption of Teams for communication, collaboration, file sharing, and student success services (advising, tutoring, etc.) has only added to the student challenges, with students expecting all services to be accessed in the same manner. This split-platform approach also leads to missed opportunities—such as the lack of a common faculty, staff, and student calendar—and complicates file sharing and other online collaboration. Other campuses are also adopting the Microsoft 365 suite as the core campus platform (CSU Fullerton and Sonoma recently went through the type of platform consolidation IITS is considering). Students would still have access to the Google tools they utilize (Docs, Sheets, Slides, etc.), but in the future their primary login, email, and calendars would be on the Microsoft platform. Adoption of Microsoft 365 would not incur any significant costs but would cause some operational disruption as students transition to Microsoft. Other campuses that have completed this transition have found it less disruptive than anticipated. IITS is developing a consolidation plan for the Microsoft 365 platform with a target implementation of Fall 2022.

7. **Preparing for a Possible Learning Management System (LMS) Transition** – CSUSM has been a Moodle (Cougar Courses) campus since 2010. At present 14 CSU campuses have moved to Canvas, five (5) remain on Blackboard (with 2 moving to Canvas), two (2) on Desire2Learn, and two (2) including CSUSM, are still on Moodle. Governor Newsom's current budget proposal includes a proposed $2 million in designated funding to promote the adoption of a common LMS, with Canvas being promoted as a common platform for the community colleges and the CSU. Adoption would be expected by 2023-24. Currently, an Academic Senate referral is before TPAC and SAC to look at our

current LMS. IITS is assisting the committees by establishing a sandbox Canvas environment to assist in faculty exploration as well as providing general awareness of the platform's capabilities. Understanding that a campus level decision will be made in the future, IITS is in the process of gathering information and preparing for the possibility of an LMS transition as early as Fall 2022. Early projections for Canvas indicate that annual licensing costs would be around $175,000 per year with an additional $35,000 in support (and a projected 3% annual increase).

8. **Expanding and Integrating the Campus App Mobile Platform** – CSUSM's Campus App has been utilized by students since Fall 2017 and continues to see strong utilization (over 15,000 unique users and 1.3 million home screen views in Fall 2020). In response to new campus procedures related to COVID-19, CSUSM has added the ability for students to do self-reported COVID-19 screenings (11,929 views in Fall 20) and a new QR code scanning function (24,344 scans in Fall 20). QR codes were posted at classrooms, labs, and the County testing site, and students used the app to scan and record their presence on campus. In the Spring term, the Campus App has been assisting with the student on-site COVID-19 testing program's scheduling and compliance. The added features will look for missed testing and send students reminders and advise staff for follow up as needed. In addition to providing mobile solutions to new challenges, IITS continues to seek various integrations that increase the app's value as a student success tool. For instance, assuming that CSUSM moves to Canvas, a tight integration of our platform already exists with Canvas (via the vendor interface) that will enable a greatly enhanced student use experience. IITS is also investigating integrations between Teams and the app with the ongoing goal of making more campus services available at the tap of a button.

C. Maintaining a Strong IT Support Organization in the Face of Increased Expectations

9. **Increased Dependency on Technology Increases Workload and IT Staff Professional Development Needs** – Units across campus are continually pushing for new applications and services to meet the demands of students, faculty, and staff. Based upon current demand levels and assumptions outlined in this document, IITS expects an ever-increasing workload as the unit supports these new technology projects. IITS' ability to meet the campus' expectations is stretched thin as the unit continues to be impacted by losses in staff and skills. By way of background, IITS had 83 staff positions in FY 16/17 and had been operating with 79 funded positions prior to eliminating funding for three (3) vacated positions in FY 20/21 due to budget cuts. IITS has also experienced challenges in retention and recruitment that, combined with a growing number of retirements, have forced the unit to increasingly depend upon a shrinking number of critical staff. With the workload for employees with critical skills

remaining higher than ever, highly skilled employees often remark on their intense workloads, yet the department lacks the staff needed to ensure that at least two employees possess the necessary expertise for core campus technology services. Adding to the concerns about existing staffing levels, recruitment difficulties for technology workers make finding new hires to CSUSM challenging as the local technology employment marketplace does not favor CSUSM (e.g. people with appropriate technology skills often do not apply to CSU San Marcos due to our low salary range). Reshuffling staff has been a frequently used strategy; however, moving IITS staff internally creates vacancies in other areas. Ultimately all of these issues impact IITS' ability to provide services and lead to staff burnout. IITS plans to prioritize the backfill of nine (9) vacant positions in FY 21/22 to rebuild staff capacity to meet the campus' growing IT support needs.

10. **Expanded Campus Technology Support Hours and Capabilities** – Faculty and students' learning-related interactions are increasingly extending outside normal operating hours. This reality has been reflected in feedback from faculty, staff, and students over the past year as they increasingly request for extended support hours into weekends and after-hours. Additionally, IITS has an outstanding request to have a greater physical presence at the Temecula campus. Internally, IITS lacks the staffing capacity to provide the requested level of service but is looking to contract with services that specialize in providing expanded support hours. Cost estimates for expanded support would be approximately $30,000 per year.

11. **Increasing Technology Costs** – IT hardware, software, and hosted services costs will continue to see annual increases for the foreseeable future. Even in the COVID-19 economy, IT companies have continued to apply significant price increases, and this trend is expected to continue. 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%. At present, the IITS' budget for enterprise software is funded at approximately $740,000 compared with current projected fiscal spend of just over $1 million dollars. Changing IT service models from one-time purchase to annual licensing will also continue to increase year-to-year technology costs. During the past five years, IITS has eliminated optional software licensing contracts, terminated professional services, deferred maintenance, and became heavily reliant on one-time funds to cover routine expenses. CSUSM will have to either supplement the funding allocated to pay for these systems or look to reduce and consolidate services. IITS assumes that CSUSM will continue to fully fund IITS for all enterprise licensing commitments.

12. **Sustaining Technology Infrastructure in a Hybrid Environment & Faculty Research Co Lo** – The campus IT infrastructure will continue its shift towards a blended environment of Cloud/Software-as-a-Service (SaaS) offerings. IT infrastructure needs also include updating on-campus technology and

supporting residual infrastructure. As IITS begins deploying new technologies and services, the unit will continue to realign on-premise services, adjust operational procedures, and identify funding strategies to support evolving IT environments. This transition will transform IITS' costs from one-time capital expense to an ongoing operating expense as we move computing to the cloud. While the cost of cloud computing is currently small at approximately $30,000 per year, it is expected to grow significantly as services are added. Additionally, faculty research is also playing an increasing role in our infrastructure planning. Active grant proposals that had used cloud computing in the past will likely move to add on-premise equipment in the Data Center in order to invest in fixed computing resource costs. In support of this proposal, IITS plans to turn an unutilized portion of the Data Center into a Faculty Co-Location facility. Costs are to be covered by the grant, CSTEM, and IITS. Long-term funding of this infrastructure and support is not fully defined at this time.

13. **Deferred Infrastructure Investments** – Older technology equipment is bound to fail without adequate replacement or migration to other service providers, which can cause outages and, potentially, disrupt campus operations. An example of delayed replacement is the obsolete PointSpan telephone system, which costs $60,000 a year to maintain. This cost is in addition to the support expenses tied to the new telephone platform. IITS has funded the replacement of the PointSpan system through salary and other cost savings and is looking to rebalance the expenses to meet multiple operational objectives. Specifically, IITS is planning to move all faculty and staff to the Microsoft A5 suite as this move will provide telephone support as well as additional security features outlined in D.14. The cost of upgrading phone services to Microsoft A5 is incrementally projected to be $51,000 in FY 21/22 (followed by $59,000, and $67,000 in subsequent fiscal years). Since IT infrastructure is critical to uninterrupted campus operations, funding to replace aging equipment with updated systems will have to come from whatever sources are available, including savings from the elimination of services.

D. Compliance Requirements and Recent Events Driving Change

14. **Addressing Security Vulnerabilities** – The recent shift to primarily virtual work has highlighted the vulnerability of several campus systems and the need to further protect campus information from determined actors who now see higher education as a prime target. While much has already been done to secure our campus—such as rolling out MFA to all faculty, staff, and students—the need remains to further strengthen our security and prevent any future security incidents. One of the core findings of the Bedrock 10 incident review was that IITS has limited visibility into malicious activities performed on campus systems. While CSUSM has had malware detection in place, Secureworks and Microsoft have both noted that CSUSM would greatly benefit from the added

visibility and response capability offered by specialized tools on all endpoints. CSUSM has been utilizing the Secureworks' Red Cloak tool since November 11th, but maintaining that tool would cost over $90,000 per year. Building upon the licensing of Microsoft A5 for telephone services, IITS is planning to commit an additional $81,000 Year 1 ($84,000 Year 2 and $88,000) to purchase the entire suite, which includes tools and monitoring capabilities that are considered a security requirement going forward.

15. **System & Regulatory Compliance** – Systemwide, the CSU is engaged in a Cyber Hygiene project (related to the Bedrock 10 incident) to evaluate campus security capabilities against several high-risk items highlighted by the events at CSUSM. This project will increase IITS' compliance requirements such as securing remote access, system hardening, and improved system logging and monitoring. These actions 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 as well as deploying technologies accessible to all. 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.

16. **Campus Accessibility** – Years of concerted effort culminated in CSUSM reaching CSU's defined baseline performance in all areas as of FY 18/19. In 2019 the CSU required plans from all campuses on how each institution would commit to expanded and improved ATI performance; a four-point action plan was submitted by CSUSM. Since then, IITS has struggled to keep pace with the plan given the challenging budget realities and virtual work environment. In early 2020, IITS hired an Accessible Instructional Materials Specialist via a temporary appointment to maintain our current service standards and keep pace with the increased workload. IITS is maintaining this position through the reuse of one-time salary dollars but is looking to the campus to permanentize funding to support accessibility as part of CSUSM's diversity, equity, and inclusion efforts. Budgetary estimate to permanentize the position is $60,000.

❖ **Goals by Fiscal Year**

1) **FY 2021/22 Goals**
   A. **Phase I of Constituent Relationship Management (CRM)** (Assumptions: B.5, C.11) – Salesforce has been deployed for Student Affairs, Extended Learning, and Community Engagement pilot projects. Phase I, as proposed, would deploy Advisor Link, add case management for units in Cougar Central, and expand communications. If approved, deployment would be in Fall 2021 with a projected funding requirement of $260,000.
   B. **Phase Out PointSpan System** (Assumptions: C.11, C.13, D.14) – The delay due to COVID-19 provided an opportunity to realign the project and deploy Microsoft Teams as the default device/client for phone services. IITS will

align deployment of Teams phone client to A5 licensing for Faculty/Staff. Projected completion of replacement phone services and shut down of the PointSpan system is a priority for the 2021 calendar year. No significant budgetary impact; incremental costs of Microsoft licensing to be offset in future fiscal years by the reduction in PointSpan maintenance costs.

C. **Provide Flexible Classrooms & Labs** (Assumptions: A.2, A.3, A.4, C.10) – As part of the effort to support various hybrid and in-person instructional models, IITS will undertake the modernization of existing classrooms in Summer 2021 with an investment of approximately $1.5 to $2 million in classroom technology, with costs assumed to be paid by federal COVID-19 funding.

D. **Rebuilding Classrooms & Labs** (Assumptions: A.1, A.2, A.3) – Last spring CSUSM quickly repurposed equipment from classrooms & labs to loan to faculty, staff, and students. Classrooms and labs have not been restored to their previous state yet and will require significant work to do so. IITS will be working to restore classrooms and labs to an operational state, which includes purchasing 500 laptops as replacements for the respective instructional areas. Funding likely paid by federal COVID-19 funding and/or existing TRP funding that has not been spent in FY 19/20 or 20/21.

E. **Upgrade to Microsoft A5 Suite** (Assumptions: B.5, B.6, B.11, D.14, D.15) – CSUSM will transition to the Microsoft A5 licensing to support Microsoft Teams telephone licensing and utilize additional security tools that are less expensive than similar products. IITS will pursue the A5 deployment in alignment with the deployment of Teams phones.

F. **Expanded Campus Service Hours and Capabilities** (Assumptions: A.1, C.9, C.10) – The move to virtual has also highlighted the limitations of the traditional Monday – Friday service model in the current environment. Several CSUs contract outside services to provide the kind of 24/7 technology support that is now an expectation. IITS similarly anticipates expanding to provide 24/7 customer service through contracted services. Cost estimate and funding request of approximately $30,000 per year.

G. **Increasing IT Costs** (Assumptions: C.5, C.6, C.7, C.8, C.11) – IT hardware, software, and hosted services costs will continue to see annual increases for the foreseeable future, partly driven by IT companies applying significant price increases. IITS continues to see increasing technology costs on almost all maintenance contracts for supported hardware and software products. Changing IT service models from one-time purchase to annual licensing will also increase costs. The enterprise software account is underfunded by approximately $250,000.

H. **Backfilling Vacancies** (Assumptions: A.4, B.5, C.9, C.10, C.12, C.16) – As was the case in prior years, the workload for employees with critical skills remains high and is projected to increase. Given the ongoing recruitment and retention challenges, IITS has been unable to make progress on workload

vulnerabilities. The department will prioritize the backfill of staff needed to ensure that at least two employees possess the expertise necessary for core campus technology services.

I. **Support Accessibility** (Assumptions: A.1, A.3, A.4, C.9, D.16) – The "Accessible Instructional Materials Specialist" supports the creation of accessible instructional materials for all students and works to expand CSUSM's training and awareness of accessibility. This role was listed in CSUSM's 2019 CAARP plan and serves as a needed role supporting instructional materials and specialized accessibility software. This role would be a campus resource and would help to train anyone requiring employee-related accommodations. Budgetary estimate to permanentize the position is $60,000.

2) FY 2022/23 Goals

J. **Learning Management System (LMS)** (Assumptions: A.3, A.4, B.5, B.7, B.8) – Assuming that CSUSM approves the adoption of Canvas, the soonest CSUSM could adopt the platform would be Fall 2022. This would align with Governor Newsom's recent budget plan that includes designated funding to promote the adoption of a common LMS, with Canvas being promoted as a common platform for community colleges and the CSU. Transition costs are unknown at this time and licensing costs are outlined in B.7.

K. **Phase II of Constituent Relationship Management (CRM)** (Assumptions: B.5, C.11) – Expansion of Salesforce operational units includes the deployment of a student community portal. Licensing costs are unknown at this time; see outline in B.5.

L. **Campus App Mobile Platform** (Assumptions: B.5, B.7, B.8) – Assuming CSUSM adopts Canvas, the Campus App would be expanded for Fall 2022 to include integrations into Canvas.

M. **Consolidation on Microsoft 365 Platform** (Assumptions: A.3,A.4, A.5,A.6, C.11,D.14, D.15) – One important learning and collaboration challenge that became even more apparent this past year is the way our single campus community is split over two productivity platforms, Microsoft and Google. Adopting the Microsoft 365 suite as the core campus platform will enhance cross-campus collaborations and reduce platform confusion. Costs estimates indicate the elimination of existing products will offset new costs.

3) FY 2023/24 Goals
No projects currently planned for FY 23/24 due to the campus' transitional status related to the teaching and administrative work environment and the campus' strategic planning process currently in progress.