KEY PRIORITIES for CSU Information Technology
In support of Graduation Initiative 2025

July 2018
The California State University recently embarked on the Graduation Initiative 2025 (GI 2025), a bold program designed to accelerate student success and degree completion. This initiative is the CSU’s commitment to remove obstacles to student success, enable students to experience transformation, and make a lasting impact on California. Because Information Technology (IT) permeates nearly every aspect of daily life at the CSU’s 23 campuses, it will be a critical foundation for many of the strategies the campuses have developed to achieve the ambitious goals of GI 2025.

The CSU has long known how important IT is to students’ success. The system’s initial Integrated Technology Strategy (ITS), developed almost two decades ago, laid the groundwork for an ongoing collaborative approach to delivering a number of key systemwide IT services. Working together has served the CSU well, enabling the system to achieve economies of scale and benefit from shared experience across the system.

To align with GI 2025, campus IT leaders and the Chancellor’s Office ITS have again collaborated, this time to articulate the guiding principles, vision statement, and key priorities for systemwide technology efforts, all of which are shared here. Achieving the key priorities will enable IT to better support the CSU campuses’ student success strategies.
VISION STATEMENT:
As a system of 23 unique universities, the CSU faces both challenges and opportunities in delivering information technology. By leveraging the size and scale of the system, the CSU can strengthen its ability to deliver technology services that are critical to student success. This can be accomplished through:

Transformation and Innovation
With campus IT leaders at the forefront, the CSU can make strategic technology decisions and identify and support innovation that will benefit the CSU’s more than 479,000 students.

Shared Services and Achieving Economies of Scale
As the largest higher education system in the U.S., the CSU has the opportunity to reap significant benefits by not replicating services unnecessarily and by leveraging its size.

Organizational Communication and Effectiveness
With so many stakeholders across the 23 CSU campuses and the geographical separation between campuses, comprehensive communication and effective collaboration are vital elements to the success of all systemwide technology efforts.

GUIDING PRINCIPLES:

a. Reduce institutional and segmental barriers for students
b. Enable data-driven decisions
c. Enable intersegmental operability where possible
d. Reduce costs, increase efficiencies and achieve economies of scale
e. Share resources and foster collaboration
f. Ensure privacy
g. Increase communication and transparency
h. Focus on service to students and faculty
i. Enhance quality and strive for continual improvement
j. Create a sustainable professional workforce
k. Foster green IT

KEY PRIORITIES:

VISION 1
Transformation and Innovation

1.1 Support Innovation
1.2 Create a “CSU Anywhere” Unified Student Experience
1.3 Develop an Enterprise Resource Planning Roadmap
1.4 Create a Cloud Strategy and Roadmap

VISION 2
Shared Services and Achieving Economies of Scale

2.1 Develop Data Repository for Business Intelligence and Decision Making (a.k.a. the CSU Data Lake)
2.2 Enable a Common Identity
2.3 Create Shared Services

VISION 3
Organizational Communication and Effectiveness

3.1 Enable and Support a Technology Workforce Strategy
3.2 Enhance Communications and Service Delivery Management
3.3 Improve Technology Procurement
VISION 1
Transformation and Innovation

KEY PRIORITY 1.1
Support Innovation

SCOPE:
Fostering innovation leads to solutions to existing problems and to transformation through the adoption of new technologies. The CSU’s IT leaders see innovation as a key focus for the system so that the CSU as a whole remains well positioned to meet the growing technology needs of its students, faculty and staff.

ACTIONS:
1. Designate a Chief Innovation Officer within the system and the Chancellor’s Office ITS to lead transformation and improvement for the CSU through innovations in technology.
   Complete. Dr. A. Michael Berman, formerly the Vice President, Technology and Innovation at CSU Channel Islands, assumed the role of CSU’s Chief Innovation Officer on a part-time basis in January 2017 and transitioned to a full-time basis in April 2018.
2. Develop forums by which the Chancellor’s Office and the campuses can easily collaborate on and share innovative ideas.
   Ongoing. The first CSU Virtual Cloud Summit was attended by over 100 participants in April 2017. The Immersive Learning Summit was held at San Diego State University in October 2017 and brought together 158 virtual reality learning innovators from across the CSU.
3. Design a resource allocation process to take potentially disruptive innovations forward from the seed stage to the greater CSU.
   Complete. The first CSU Innovation grants were distributed in the summer of 2017. $90,000 was allocated to seed innovative projects at seven CSU campuses so far. Innovation grants will be an ongoing annual endeavor.
4. Help campuses develop strategies to support cyberinfrastructure for research endeavors.
KEY PRIORITY 1.2
Create a “CSU Anywhere” Unified Student Experience

SCOPE:
Students must experience fewer barriers and less friction as they move into, through, between, and, ultimately, out of the CSU system. To that end, they must be able to easily access the tools and resources that facilitate student success. Many, if not most, of those services should be self-service. The CSU seeks to use technology solutions to find the friction points students regularly encounter and reduce or eliminate them; it should be seamless for a student to access or transfer into and between CSU campuses. Similarly, the resources students need should be as available at one campus as any other, and the look, feel and navigation of a CSU student through our virtual environment should be both easy, intuitive and consistent.

ACTIONS:
1. Review student support services to determine how they can be seamlessly integrated with the CSU’s Enterprise Resource Planning (ERP) environment to improve student experiences.
2. Begin working with the California Community Colleges and California Department of Education systems to identify areas where data can be shared or leveraged to ease student transitions or populate degree planning tools.
3. Enable students’ ability to connect to internet/network wireless resources anywhere in the system, potentially using Eduroam.

Complete. 22 interested campuses and the Chancellor’s Office have implemented Eduroam to support internet access for CSU students and faculty across the system.

KEY PRIORITY 1.3
Develop an Enterprise Resource Planning (ERP) Roadmap

SCOPE:
The California State University’s administrative functions are supported with a set of Enterprise Resource Planning (ERP) systems reaching end-of-life. These systems have been highly customized to support diverse CSU business practices that cannot adequately meet the evolving needs of the CSU. These current ERP systems primarily support back-end staff functionality. The next generation of ERP systems are end-user-centric with business process ownership pushed to students, faculty and staff with limits on the ability to modify system functionality. The CSU needs to position itself to adopt these next-generation ERP systems.

ACTIONS:
1. Establish a guiding principle that ERP investments are maximized by accepting applications as close to “as-delivered” as possible.

Complete. The CSU’s Enterprise Information Systems Advisory Committee developed and finalized the statement of direction for the CSU’s ERP strategy.
2. Prioritize business process redesign over system customizations.

In progress. The statement of direction includes this as a part of the paradigm.
3. Collaborate with the CSU’s business partners, focusing on aligning business processes for current or future ERP systems.
4. Develop and implement a comprehensive set of data standards to support business intelligence.
5. Determine where learning management systems and other student resources can be fully integrated into ERP systems to improve student experiences.

KEY PRIORITY 1.4
Create a Cloud Strategy and Roadmap

SCOPE:
Cloud computing offers increased flexibility, reduced capital requirements, improved disaster recovery, and enhanced reliability. For these reasons, public and private organizations alike are moving their technology resources into the cloud. The CSU will develop a cloud transformation strategy and implementation roadmap to ensure that campus IT departments can benefit from the advantages of the cloud while maintaining their data governance policies and standards.

ACTIONS:
1. Develop a strategic framework for using cloud services/architecture and a cloud transformation advisory group.

In progress. A Cloud Steering group has been established and the development of the strategic framework is underway.
2. Explore signing service agreements with major cloud vendors while leveraging existing Internet2/CENIC contracts.

Complete. Two agreements have been signed, enabling campuses to procure services from two major cloud vendors.
3. Develop a transformation roadmap to deliver the strategic framework.

Complete. The framework, developed in conjunction with campus technology leaders and cloud experts, was formally provided to the relevant systemwide committees.
4. Create and provide cloud assessment tools that include technical and financial components.

In progress. Assessment tools are in various stages of development and refinement.
5. Define the metrics of success for transitioning to cloud services.
KEY PRIORITY 2.1
Develop Data Repository for Improved Business Intelligence and Decision Making
(a.k.a. CSU “data lake”)

SCOPE:
Collecting and normalizing the vast amount of CSU data (currently located in many separate technology systems) into one accessible location will enable the creation of customized dashboards, reports and predictive analytics. This enhanced business intelligence data will support academic and administrative information needs. Benefits will include:

- Strengthening the ability of CSU leaders to make strategic decisions
- Creating a culture of fact-based decision making via data analysis
- Integrating data types across business functions and eliminating knowledge silos
- Establishing a repeatable process to grow and improve the quality and accessibility of organizational data assets
- Providing data that can be used for predictive analytics for student success efforts

ACTIONS:

1. Create a single “data lake” for all relevant CSU system data.
2. Create clear communication about the data lake, its benefits, and roles and responsibilities for managing and accessing it.
3. Create a “semantic layer” of the data, or a business representation of the data that helps end users access data autonomously using common terms.
4. Provide authorized users at the Chancellor’s Office and campuses with access to the data lake.
5. Use the data lake as the back end for Chancellor’s Office-delivered dashboards and reporting.
KEY PRIORITY 2.2  
Enable a Common Identity

SCOPE:  
Developing a unified, common CSU identity will optimize student access to CSU services and resources. The use of a common identity will also reduce friction and promote collaboration between the CSU, the California Community Colleges and other sectors. A common identity enables:

- Improved student experience by providing easy, consistent access to resources and services for students
- Improved administrative efficiency by eliminating processes and reducing errors
- Improved long-term data collection by enabling accurate tracking of students’ journeys, including across multiple institutions and even after graduation for enhanced alumni relationships and philanthropic opportunities

ACTIONS:

1. Develop a roadmap and guiding principles for the use of a common identifier within core administrative and educational systems.
2. Establish a common identity specification, for the exchange of identity verification among participating institutions.
3. Implement a master data system, operational practices and governance processes.

KEY PRIORITY 2.3  
Create Shared Services

SCOPE:  
Enhancing efficiencies across all campuses by increasing expertise, reducing costs and putting in place common operating practices will allow the CSU to better use its resources. The system is uniquely positioned to leverage shared services due to the common hardware and software provided to all campuses by systemwide technology initiatives.

ACTIONS:

1. Develop a Center of Excellence for security and compliance and explore how existing individual campus security centers of excellence can be leveraged for the benefit of the system.  
   In progress. The information security program is being aligned with the ISO27001 framework. This will enable a common foundation from which to identify and support shared centers of excellence.
2. Investigate the feasibility of using Corporation for Education Network Initiatives in California (CENIC) offerings for shared security and network operations center services.  
   In progress. Investigation is complete and a recommendation is under development.
3. Develop shared research computing and infrastructure resources for faculty and student research efforts.  
   In progress. Interested campuses have formed a committee that will develop a recommended infrastructure architecture to meet research needs.
KEY PRIORITY 3.1
Enable and Support a Technology Workforce Strategy

SCOPE:
The staff that designs, implements and supports technology for the CSU are critical to the success of the institution. It is imperative that the CSU attract, grow and retain a professional, engaged technology workforce by providing training and professional development, updating classification standards and collaborating across campuses.

ACTIONS:
1. Support Systemwide Human Resources as they conduct an IT classification and compensation review.  
   In progress. CSU IT leaders are involved in the support of the CSU’s systemwide Human Resource’s efforts.
2. Establish an advisory group with members of the Information Technology Advisory Committee (ITAC) to assist with the review and revision of classification standards. The group will focus on:
   a. Collaborating on methods to attract, grow and retain an effective IT workforce
   b. Creating structured approaches to professional development including both technical training for common toolsets and IT leadership development
   c. Establishing an annual CSU Tech Conference so that staff from across the system can work together to identify ways to collaborate and share talent
   d. Forming special interest groups for common applications and incentive systems for collaboration
   e. Improving capabilities to support already implemented technologies more effectively
   In progress. A committee to lead this effort has been formed and it includes two campus CIOs. The committee will soon evaluate campus input on the topic received via a recent systemwide survey.
KEY PRIORITY 3.2
Enhance Communications and Service Delivery Management

SCOPE:
Superior communication can ensure the success of IT initiatives and facilitate collaboration and innovation. Campuses require clear, concise communication about the delivery of the many systemwide technology services supported by the Chancellor’s Office. The communication should be consistent and delivered in a comprehensive manner to the many technology stakeholders across the system. Communication among campuses is also critical and tools and methods to enable this should be a priority for the CSU.

ACTIONS:
1. Determine how enhanced communication can be combined with a structured, dedicated service delivery management function delivered by the Chancellor’s Office ITS.
   In progress. A new area of focus has been identified for the Chancellor’s Office ITS and will include the appointment of campus engagement partners to enhance communication and service delivery.
2. Develop a comprehensive approach to communicating about IT efforts supported by the Chancellor’s Office. This should include the use of multiple channels to communicate and liaise with broad audiences such as academic and student affairs organizations, presidents, provosts, chief business officers, etc.
3. Adopt a communications tool that is easy to use, allows people to opt in and is searchable. Enable and facilitate collaboration and communication among campuses via this shared tool.
   In progress. A new collaboration platform, CalStateTech Slack, has been launched and several systemwide technology groups are piloting it.

KEY PRIORITY 3.3
Improve Technology Procurement

SCOPE:
Information technology purchases happen every day on campuses. A lack of coordination between campuses on purchases means that opportunities to leverage the size of the CSU are being missed. Additionally, product research and lessons learned by one campus are not easily accessed by another campus interested in the same technology. Improving information technology procurement by focusing on collaborative purchases and transparency of purchasing data will save the CSU money and increase efficiency.

ACTIONS:
1. Develop a list of IT purchase categories that should have systemwide purchasing agreements and support the Chancellor’s Office procurement department in its efforts to conduct Request for Proposals (RFPs) and create purchasing vehicles for campuses to leverage economies of scale.
2. Create a searchable repository of IT procurement data that enables campuses to:
   a. Easily determine the products and services that can be purchased via systemwide agreements.
   b. Provide transparency for spend analytics so that campuses can discover vendors, products and services that have been purchased by other campuses.
3. Increase awareness of accessible technology requirements for information technology procurements.
4. Create a central repository for accessibility documents so that campuses do not need to conduct the review processes and acquire vendor documents independently 23 times.
Key Priorities for CSU Information Technology

23 State University Campuses