College of the Sequoias

Technology Plan 2025-2028

Sequoias Community College District
College of the Sequoias

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Visalia, CA 93277	Hanford, CA 93230	Tulare, CA 93274

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Overview, Mission, and Vision

Overview

The Technology Plan for the Sequoias Community College District is intended to provide an overall framework for the appropriate implementation of technology solutions within the District. The purpose of the plan is to align the application of technology with the District's Mission, Vision, and Strategic Goals and Objectives. In addition, it provides a roadmap for technology initiatives undertaken by the District for the next three years. The plan is reviewed and evaluated annually, reported accomplishments, and tracked initiatives to assess progress. The timelines in the plan may be adjusted based on these periodic reviews.

This plan is divided into seven sections. The first section includes the strategic plan overview, mission, and vision for the District. The second section outlines key technology issues and trends in higher education. The third section provides a brief overview of the process used to develop the plan. The fourth section outlines the plan's strategic guiding principles. The fifth section lists the technology initiatives supporting the Technology Plan Initiatives and the District's Strategic Objectives. The sixth section provides a crosswalk between the Plan initiatives, District initiatives, District objectives, and Regulatory/Legal requirements. Finally, the seventh section provides a glossary of key technical terms that appear in the plan.

District Mission Statement

Sequoias Community College District, as a designated Hispanic-Serving Institution, provides excellent, accessible, and equity-minded higher education to our diverse student population, regardless of background. We believe in students achieving their full educational potential and support teaching, student learning, and success in attaining a variety of degrees and certificates, from basic skills to transfer education and workforce development.

District Vision Statement

The entire College of the Sequoias community works in an environment of mutual respect to realize the following vision:

COS students will achieve their full educational potential regardless of race, ethnicity, age, gender, sexual orientation, immigration status, ability, culture, religion, and learning modality.

The COS environment will create a positive attitude among COS employees that carries over to the students and into the community.

COS will remain a community leader whose high standards positively impact the lives of the population it serves.

COS will align educational programs for higher education transfer, as well as to meet the constantly emerging economic and workforce development needs of the community through partnerships with business, government, industry and labor.

Key Technology Issues and Trends

These key technology issues and trends were based on an initial list from the 2026 Educause Top 10 list and refined by the COS Technology Committee.

1. **Collaborative Cybersecurity:** Building a culture of shared responsibility and awareness regarding cybersecurity among all stakeholders.

2. **The Human Edge of AI:** Empowering students, faculty, and staff to engage with AI tools in a critical, ethical, and creative manner.

3. **Business Intelligence and Analytics**: Developing effective methodologies for business intelligence, reporting, and analytics, ensuring relevance towards institutional priorities, decision making, and accessibility by administrators, faculty, staff, and students.

4. **Building a Data-Centric Culture Across the Institution:** Enhancing data access and treating data as a strategic asset.

5. **Knowledge Management for Safer AI:** Integrating knowledge management into data governance to mitigate AI risks.

6. **Measured Approaches to New Technologies:** Making informed technology investment decisions based on clear assessments of costs and benefits.

7. **Technology Literacy for the Future Workforce:** Supporting technology training to enhance student success in acquiring in-demand skills.

8. **Fostering Community and Connection:** Encouraging collaboration and connection among faculty, staff, and students to navigate technology challenges together.

9. **Equity and Inclusion in Technology:** Ensuring that technology initiatives promote equity and inclusion within educational environments.

10. **Sustainable Technology Practices:** Implementing practices that support sustainability in technology use and infrastructure.

11. **Optimizing Educational Technology**: Collaborating with faculty and academic leadership to better understand educational and operational needs. This knowledge can be leveraged to provide appropriate technology tools and services, resulting in a better fit to optimize teaching, learning, and operational success.

12. **Information Technology Funding Models**: Developing Information Technology funding models that sustain core services, support innovation, and facilitate growth.

13. **Information Technology Organizational Development**: Create a Technology Services organizational structure that supports staff roles. Provide a roadmap of staff training to encourage an environment where learning and sharing ideas fortify better technology service delivery.

These priorities reflect a shift towards a more human-centered approach in technology leadership within higher education, emphasizing the need for collaboration and community building as institutions move forward into an uncertain future.

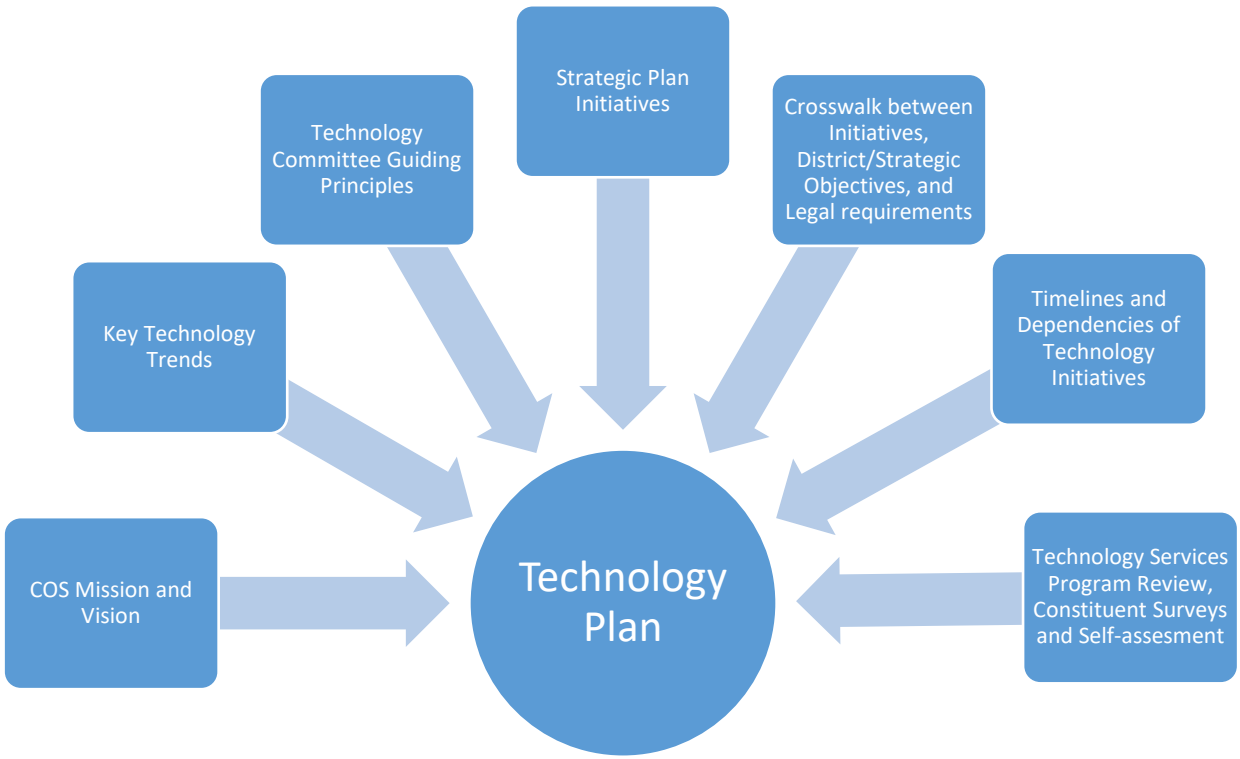
Planning Process

The three-year technology plan development process at College of the Sequoias (COS) involves alignment with the COS Mission and Vision, ACCJC Accreditation Standards, District goals as outlined in the Master Plan, District objectives as outlined in the Strategic Plan, the Technology Committee's charges, and technology needs as identified in periodic technology surveys of students, faculty, and staff, as well as those needs identified in the Shared Governance District-wide program review process. The Technology committee collaborates with the Educational Technology Committee to enhance the outcomes of both committees. The Technology Committee will assess the progress by annual reviews and satisfaction levels indicated in the MyGiant Surveys.

Developing the 2025-2028 District's Technology Plan involves structured documentation and planning. The Technology Committee, which reports to the District Governance Senate (DGS), is the District's participatory governance group responsible for district-wide technology planning and evaluation. The Technology Committee advises, informs, and makes specific recommendations to DGS regarding technology initiatives, projects, and future directions throughout the District. In addition, the Technology Committee's recommendations go to senior management for budgetary implication proposals.

The Technology Committee has primary responsibility for developing and providing oversight for implementing a comprehensive, district-wide information technology strategic plan. Additionally, the Technology Committee provides direction for maintaining the ongoing implementation effort to achieve the goals of the plan. The Technology Committee is co-chaired by the Dean of Technology and one of the faculty members of the Technology Committee.

As a subcommittee of the District Governance Senate, the central district-wide participatory governance committee with broad representation from all constituent groups, the Technology Committee advanced the draft plan to the District Governance Senate for review, discussion and approval.



Strategic Guiding Principles for Technology Plan

The Technology Committee established these guiding principles to support and achieve the goals set out in the COS Technology Plan.

- Prioritize and maximize the utilization of technologies that advance teaching, learning, and student support district-wide. These technologies are user-focused and driven by the needs of, and in consultation with students, faculty, and staff.
- Build a data governance framework that establishes ownership and understanding of data for it's use in reporting, strategic planning, and decision making.
- Develop and enhance systems that help employees access and understand data transforming it into actionable information for strategic planning, decision making, and improved productivity.
- Maintain district-wide Information Technology infrastructure in line with current industry standards. Take advantage of cloud-based computing options to improve teaching, learning, productivity, and functionality.
- Maintain software and hardware to ensure reliability, usability, and cybersecurity standards
- Standardize and improve technologies where feasible, desirable, scalable, and cost-effective.
- Implement and maintain structures and systems that provide a layered approach to protecting data and information technology assets.
- Design and maintain systems for risk mitigation, and disaster recovery (DR).
- Facilitate technology training for staff in existing and emerging technologies.

Technology Plan Initiatives

The initiatives outlined in this plan are supported by the COS Technology Strategic Guiding Principles.

Initiative 1	Every other spring, analyze data gathered from employee and student satisfaction surveys.
Initiative 2	Collaborate with the Research group to establish a new data warehouse/lake using modern cloud-based architecture in AWS to provide the needed data dashboards for decision making to the proper stakeholders in a user-friendly way.
Initiative 3	Continue Infrastructure cloud migration to support District and Technology Services' growing needs to comply with Disaster Recovery initiatives.
Initiative 4	Evaluate options for modernization of the Student Information System
Initiative 5	Work to eliminate shadow systems/databases and use district-supported administrative software to ensure backup and disaster recovery procedures protect the District against cyber threats and data leaks.
Initiative 6	Continue upgrades to the wireless and wired network infrastructure to stay current with industry standards, enhance coverage, and mitigate cybersecurity risk.
Initiative 7	Evaluate and enhance the hardware and software acquisition, tracking/inventory control, licensing, replacement, and utilization. Support the Technology Services infrastructure to ensure better productivity, efficiency, and total cost of ownership.
Initiative 7.1	Maintain documentation that aggregates Technology Services approved software to include newly acquired items, support contacts, licensing, upgrade needs, and the associated costs.
Initiative 8	Assit with the improvement of student engagement success, enhance targeted marketing for support resources for specific student groups and program majors, address technology access barriers, and promote SEP check-ins – (District Action Item 2.1.3)
Initiative 9	Assist in the development of a tracking method for CTE student employment outcomes to measure success - (District Action Item 2.4.4)
Initiative 10	Conduct a comprehensive audit of institutional and operational data collection practices, governance structures, analysis tools and an inventory of available datasets across departments - (Disstrict Action Item 4.1.1)
Initiative 11	Develop a data governance manual, informed by audit findings, that outlines the appropriate methodology for gathering relevant data, and storing, sharing and utilizing it to inform decisions within each department. – (District Action Item 4.1.2)
Initiative 12	Establish a centralized directory for data repositories to ensure information is securely stored, easily accessible, well-organized, and provide employees with training on its use. – (District Action Item 4.1.3)
Initiative 13	Continue providing a district-wide information technology orientation for new students and staff.

Initiative 14	Continue routine cybersecurity training for employees to encourage best practices and maintain security as a baseline standard.
Initiative 15	Maintain a comprehensive plan to implement information assurance, security, and cybersecurity strategies.
Initiative 16	Migrate to the Microsoft Entra identity provider (IdP) system.
Initiative 17	Perform annual security audits in Banner and other administrative systems working with department heads to ensure their staff has the access they need to perform their job and no more (principle of least privilege).
Initiative 18	Conduct biannual cybersecurity analysis and report findings and updates to the Chancellor's office.
Initiative 19	Collaborate with Marketing on the construction of a new district website and migrate content to the new site.
Initiative 20	Complete the implementation and migration to the new BannerWeb 9 self-service system.
Initiative 21	Maintain and test disaster recovery (DR) plans and systems annually.
Initiative 22	Assist in the development of a plan and mechanisms for compliance with Title II digital accessibility.

Initiative Crosswalk

Crosswalk between Plan Initiatives, District Initiatives, District Objectives, and Regulatory/Legal Requirements

Initiative	Topic	Related District Goal, Objective, or Action	Target Completion Date	Measurement, Assessment, or Regulatory Requirement
1	Analyze student and staff satisfaction surveys	Goal 4	Ongoing	Giant Survey
2	Data warehouse/reporting	Goal 4	Dec 2027	
3	Infrastructure cloud migration	Goal 4	June 2028	
4	Student Information System Modernization	Goal 4	June 2028	
5	Eliminate shadow systems/databases	Goal 4	Ongoing	
6	Network infrastructure upgrades	Goal 4	Ongoing	
7	Enhance the software acquisition, tracking, and inventory control process.	Goal 4	Dec 2026	
7.1	Maintain documentation site for COS approved software	Goal 4	Ongoing	
8	Address any technology access barriers for student engagement	Action 2.1.3	May 2027	
9	Assist in development of employment outcomes	Action 2.4.4	May 2027	
10	Institutional and operational data audit	Action 4.1.1	May 2026	
11	Develop data governance manual	Action 4.1.2	May 2027	
12	Centralized data directory and training	Action 4.1.3	May 2028	
13	District-wide information technology orientations	Goal 4, Action 2.1.3	Ongoing	
14	Cybersecurity training for employees *	Goal 4	Ongoing	AB 178
15	Maintain cybersecurity plan for the district *	Goal 4	Ongoing	AB 178
16	Migrate to Microsoft Entra IdP *	Goal 4	Dec 2026	AB 178
17	Annual security audit in Banner *	Goal 4	Ongoing	GLBA
18	Cybersecurity analysis reports to Chancellor *	Goal 4	Ongoing	AB 178
19	New COS website	Goal 4	Dec 2026	
20	Implement all BannerWeb 9 modules	Goal 4	June 2026	
21	Annual disaster recovery test	Goal 4	Each Spring	
22	Title II digital accessibility compliance *	Goal 4	Ongoing	Title II

* LR=Regulatory/Legal Requirement

Glossary of Terms

Cloud computing

Cloud computing, also known as on-demand computing, is a kind of internet-based computing, where shared resources and information are provided to computers and other devices on-demand. It is a model for enabling ubiquitous, on-demand access to a shared pool of configurable computing resources. Cloud computing and storage solutions provide users and enterprises with various capabilities to store and process their data in third-party data centers. It relies on sharing resources to achieve coherence and economies of scale, similar to a utility (like the electricity grid) over a network. At the foundation of cloud computing is the broader concept of converged infrastructure and shared services. Cloud computing services can be private, public, or hybrid. Private cloud services are delivered from a business's data center to internal users. This model offers versatility and convenience while preserving management, control, and security. Internal customers may or may not be billed for services through IT chargeback. A third-party provider delivers the cloud service over the Internet in the public cloud model. Public cloud services are sold on-demand, typically by the minute or the hour. Customers only pay for the CPU cycles, storage or bandwidth they consume. Leading public cloud providers include Amazon Web Services (AWS) at 39.2% market share, Microsoft Azure at 24% market share, Google Cloud Platform (GCP) at 11% market share and a handful of others like IBM and Oracle Cloud Infrastructure (OCI) taking up the remaining 25% of the market.

Disaster recovery and business continuity

Disaster recovery (DR) involves a set of policies, procedures, systems, and infrastructure to enable the recovery or continuation of vital technology infrastructure and systems following a natural or human-induced disaster. Business continuity encompasses a defined set of planning, preparatory and related activities that are intended to ensure that an organization's critical business functions will either continue to operate despite serious incidents or disasters that might otherwise have interrupted them or will be recovered to an operational state within a reasonably short period. As such, business continuity includes three key elements, and they are 1. Resilience: critical business functions and the supporting infrastructure are designed and engineered so that they are materially unaffected by most disruptions, for example, through the use of redundancy and spare capacity; 2. Recovery: arrangements are made to recover or restore critical and less critical business functions that fail for some reason. 3. Contingency: the organization establishes a generalized capability and readiness to cope effectively with whatever major incidents and disasters occur, including those that were not, and perhaps could not have been, foreseen. Contingency preparations constitute a last-resort response.

Enterprise resource planning (ERP)

Enterprise resource planning (ERP) is a category of business-management software—typically a suite of integrated applications—that an organization can use to collect, store, manage and interpret data from many business activities. ERP provides an integrated view of core business processes, often in real-time, using common databases maintained by a database management system. ERP systems track business resources—persons, courses, classes, programs, positions, vendors, internal departments, budgets, etc. — and the status of business commitments: enrollments, orders, purchase orders, payroll, etc. The applications that make up the system share data across various departments (admissions and records, financial aid, instruction, accounting, etc.) that provide the data. ERP facilitates information flow between all business functions and manages connections to outside stakeholders. Enterprise system software is a

multibillion-dollar industry that produces components supporting various business functions. IT investments have become the largest category of capital expenditure in United States-based businesses over the past decade. Though early ERP systems focused on large enterprises, smaller enterprises increasingly use ERP systems.

The ERP system integrates varied organizational systems and facilitates error-free transactions and production, enhancing the organization's efficiency. However, developing an ERP system differs from traditional system development. ERP systems run on various computer hardware and network configurations, typically using a database as an information repository. The ERP used by the District is the Ellucian Banner suite.

Single sign-on (SSO)

Single sign-on (SSO) is a session and user authentication service that permits users to use one set of login credentials (e.g., name and password) to access multiple applications. The service authenticates the end-user for all the applications to which the user has been given rights and eliminates further prompts when the user switches applications during the same session. On the back end, SSO helps log user activities and monitor user accounts.

The Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education.

FERPA gives parents certain rights with respect to their children's education records. These rights transfer to the student when he or she reaches the age of 18 or attends a school beyond the high school level. Students to whom the rights have transferred are "eligible students."

Parents or eligible students have the right to inspect and review the student's education records maintained by the school. Schools are not required to provide copies of records unless parents or eligible students can't review the records for reasons such as great distance. Schools may charge a fee for copies.

Parents or eligible students have the right to request that a school correct records which they believe to be inaccurate or misleading. If the school decides not to amend the record, the parent or eligible student then has the right to a formal hearing. After the hearing, if the school still decides not to amend the record, the parent or eligible student has the right to place a statement with the record setting forth his or her view about the contested information.

Generally, schools must have written permission from the parent or eligible student to release any information from a student's education record. However, FERPA allows schools to disclose those records, without consent, to the following parties or under the following conditions (34 CFR § 99.31):

- School officials with legitimate educational interest;
- Other schools to which a student is transferring;
- Specified officials for audit or evaluation purposes;
- Appropriate parties in connection with financial aid to a student;
- Organizations conducting certain studies for or on behalf of the school;
- Accrediting organizations;
- To comply with a judicial order or lawfully issued subpoena;
- Appropriate officials in cases of health and safety emergencies; and

- State and local authorities, within a juvenile justice system, pursuant to specific State law.

Schools may disclose, without consent, "directory" information such as a student's name, address, telephone number, date and place of birth, honors and awards, and dates of attendance. However, schools must tell parents and eligible students about directory information and allow parents and eligible students a reasonable amount of time to request that the school not disclose directory information about them. Schools must notify parents and eligible students annually of their rights under FERPA. The actual means of notification (special letter, inclusion in a PTA bulletin, student handbook, or newspaper article) is left to the discretion of each school.

Personally identifiable information (PII)

Personally identifiable information (PII) is any data that could potentially identify a specific individual. Any information that can be used to distinguish one person from another and can be used for de-anonymizing anonymous data can be considered PII.

Total cost of ownership

Total cost of ownership (TCO) is an estimation of the expenses associated with purchasing, deploying, using and retiring a product or piece of equipment. TCO includes both direct and indirect, short-and long-term costs of a product or system over the life cycle of the product or system. The purchase price of hardware and software is typically less than 50% of the total direct costs.

Voice over Internet Protocol (VoIP)

Voice over Internet Protocol (VoIP) is a technology that allows making voice calls using a broadband Internet connection instead of a regular (or analog) phone line. Some VoIP services may only allow one to call other people using the same service, but others may allow one to call anyone who has a telephone number - including local, long distance, mobile, and international numbers. Also, while some VoIP services only work over a computer or a special VoIP phone, other services allow one to use a traditional phone connected to a VoIP adapter.

Wide Area Network (WAN)

A wide area network (WAN) is a telecommunications network or computer network that extends over a large geographical distance. Wide area networks are often established with leased telecommunication circuits. Business, education and government entities use wide area networks to relay data among staff, students, clients, buyers, and suppliers from various geographical locations. In essence, this mode of telecommunication allows a business to effectively carry out its daily function regardless of location. The Internet may be considered a WAN. Related terms for other types of networks are personal area networks (PANs), local area networks (LANs), campus area networks (CANs), or metropolitan area networks (MANs) which are usually limited to a room, building, campus or specific metropolitan area respectively.