



**Napa Valley College**  
**Technology Master Plan**  
**2022-2027**

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## Napa Valley College District Technology Committee

The District Technology Committee facilitates technology planning and provides guidance and oversight for the District's major technology decisions. The DTC operates as a District Standing Committee that provides recommendations to the Council of Presidents regarding technology-related issues in concert with policies, guidelines and standards.

### **Mission**

The Technology Committee promotes the use of technology to increase efficiency of college operations, to support teaching, and to enhance student learning.

### **Role & Responsibilities**

- Provide oversight for the development, implementation, and updating of an integrated Technology Plan that is responsive to the Educational and Facilities Master Plans primarily as well as other District plans or educational initiatives as appropriate.
- Review and develop technology-related policies and standards for the District.
- Make specific recommendations to the Council of Presidents on the use of technology throughout the District with regard to both ongoing activities and future directions.
- Disseminate information about the current activities and future plans on the use of technology throughout the District.
- Maintain a comprehensive overview of the entire technological effort in the District.
- Establish metrics to evaluate District-wide technology project proposals for District funding consideration and prioritization.
- Make recommendations and advocate for funding with respect to the acquisition of new and/or replacement technology including District computers, classroom technology, infrastructure, or special equipment.

### **Membership Composition**

#### Voting Representatives

- Five (5) faculty appointed by the Academic Senate.
- Two (2) classified staff appointed by the Classified Senate.
- One (1) student appointed by the Associated Students of NVC.
- Two (2) administrative/confidential staff appointed by the Administrative/Confidential Senate.

#### Co-chairs

- Senior Director, Institutional Technology or designee as District co-chair (non-voting).
- Additional co-chair as elected from voting representatives for three year term.

#### Additional Staff

- Administrative Assistant, Institutional Technology (non-voting).

#### Quorum

- Quorum will consist of greater than 50% of the appointed voting membership for purposes of conducting business. Resource members, guests and members may speak to any issue.

The group will first attempt to reach consensus on any business/issue. If consensus is not reached, then majority of those voting will determine the action.

**2020-2021 Members**

Eric Houck	District – Co-Chair
Stan Hitchcock	Academic Senate Rep. – Co-Chair
Vacant	ASNVC Rep.
Maria Biddenback	Academic Senate Rep.
May Jong	Academic Senate Rep.
Regina Orozco	Academic Senate Rep.
Melinda Tran	Academic Senate Rep.
Jose Sanchez	Classified Senate Rep.
Brandon Tofanelli	Classified Senate Rep.
Bryan Lym	Administrative Rep.
Patti Morgan	Administrative Rep.

**2017-2018 Members**

Eric Houck	District – Co-Chair
Joshua Hanson	Academic Senate Rep. – Co-Chair
Vacant	ASNVC Rep.
Donna Geiger	Academic Senate Rep.
Sean McCann	Academic Senate Rep.
Robert Miller	Academic Senate Rep.
Gregory S. Rose	Academic Senate Rep.
Jose Sanchez	Classified Senate Rep.
Renee Sicard	Classified Senate Rep.
Christopher Farmer	Administrative Rep.
Maria Villagomez	Administrative Rep.

**2016-2017 Members**

Robert Parker	District – Co-Chair
Patti Morgan	Administrative Rep. – Co-Chair
Dominique Elayda	ASNVC Rep.
Donna Geiger	Academic Senate Rep.
Maricel R. Ignacio	Academic Senate Rep.
Robert Miller	Academic Senate Rep.
Gregory S. Rose	Academic Senate Rep.
Jose Sanchez	Classified Senate Rep.
Renee Sicard	Classified Senate Rep.
Cathryn Wilkinson	Administrative Rep.



## Executive Summary

The Technology Plan at Napa Valley College (NVC) defines technology trends and critical needs (educational technology equipment and software) for the next five years. As such, the Technology plan represents a roadmap, which gives the District direction in the allocation of resources towards educational, institutional, and information technology at NVC. The Technology Plan recognizes the need for a governance structure that affirms and reflects the coordination between educational, institutional, and information technology. This structure reflects and recognizes the differences in purpose and functions of educational and institutional technologies, taking these differences into consideration when planning and administering institutional resources for technology.

### Basic Assumptions

- The focus is comprehensive, institution-wide, and inclusive of multiple instructional sites.
- Adequate funding levels need to be identified to successfully implement the plan.
- Baselines for technology, support, and training need to be established.
- The plan is a “living document” and will be reviewed and adjusted on an annual basis, as technology and NVC needs evolve.
- The plan is modular in nature and most of the initiatives can be implemented independent of the whole.

### Common Themes

- Student success and access to current technology are synonymous.
- The quality of our learning environments depends on technological currency.
- Our students and staff expect technology to become smaller, faster, and mobile.
- Our installed technology base has greatly expanded and needs to be maintained.
- Wireless technology has become a mature technology able to support learning everywhere.
- The infrastructure that delivers and supports technology must be constantly improved.
- Connectivity, security and bandwidth are the gating factors to end users experience with Institutional Technology (IT).

### **Shared vision for the role of technology**

Technology is a tool for learning that expands instructional repertoire and is the vehicle that maximizes the capacity of all faculty and students. It is the vision of NVC that students be engaged in a stimulating academic environment and a challenging curriculum that is student-centered and focused on inquiry-based learning.

Specifically, the common vision is that technology be available and effectively supported for all students and staff:

- To provide global access to information
- To meet the curricular needs of all learners
- To provide access to the general curriculum
- To refine critical thinking skills and foster creativity
- To provide a medium for expression and communication
- To collect, assess, and share performance information
- To improve the effectiveness of administrative tasks
- To provide skills and proficiencies necessary for the workforce
- To ensure equitable access to everyone

It is the intention that this vision will remain constant over the course of the plan and that it will guide the day-to-day and year-to-year implementation of technology across NVC.

## Guiding Principles

Technology is more than improving business processes. Technology is becoming more and more strategically as well as fundamentally important to an organization's success. Successful organizations must differentiate their strategies and models, and then identify how IT can add value to those endeavors. Organizational planning examines how IT can shape and support these strategies.

NVC's IT strategy needs to align with the institution's strategy and goals. As technology and the NVC's institutional needs continue to grow and evolve, so should the strategic plan. For IT strategies to be successful, we must:

- Understand the institution's priorities and allocate resources and structure IT to support them.
- Advocate efficient use and management of resources through wise use of technology and multiyear fiscal planning which provides stability, sustainability, and supports longer-term IT strategies.
- Establish institutional technology standards that ensure interoperability of systems and reduced Total Cost of Ownership (TCO).
- Establish centralized purchasing guidelines to support conformity to standards utilizing preferred vendors to simplify procurement, secure discount pricing, and streamline technology support.
- Enable the acquisition of additional IT resources such as user fees, technology grants, and partnerships through the innovative use and promotion of technology.
- Establish and ensure reasonable, fair, and equitable funding mechanisms and processes.
- Plan and leverage technology assets not only for improving institutional efficiencies and cost savings, but to motivate and increase student success.

## IT Departmental Goals

- Support the campus mission through adaptive and innovative use of technology.
- Achieve the alignment of technology and innovation with institutional goals.
- Provide a robust, reliable, and secure technology infrastructure.
- Procure, provision, and refresh new, cost-effective technologies to keep the campus community effective, current, and competitive.
- Assist and empower functional areas and organizational units across campus to best integrate technology, in order to improve efficiencies, self-reliance, and success.
- Update IT organizational structure; fill position vacancies.
- Provide a seamless service desk that promotes the delivery of comprehensive technology services to the campus.
- Update, develop, and proactively communicate institutional policies and sanctions related to technology.



## Strategic Initiatives

The following strategic initiatives will be undertaken in order to achieve the College’s Strategic Goals over the next five years. The initiatives originate from various sources. Many of the initiatives have been brought forward through the Facilities and Technology Committees or through plans written by programs across campus. Some initiatives have come from the various participatory governance and advisory groups within the District and other initiatives originate from the Institutional Technology Department.

The following chart displays the alignment of Institutional Strategic Plan goals with the information technology initiatives:

Strategic Goals Cross-Referenced to Information Technology Initiatives	Work with local educational partners to promote opportunities at NYC and equip incoming students with the skills and resources needed for college success.	Engage NYC students and assist in their progress towards educational and job training goals.	Increase NYC student achievement and completion of educational and job training goals.	Ensure the fiscal stability of NYC as a community-supported district.	Enhance collaboration between NYC and community & civic partners.	Achieve equity in student outcomes and promote equity-mindedness as a means to evaluate all District practices.
Standardization & Technology Currency						
Operational & Workflow Efficiencies						
Infrastructure & Access Improvement						
Safety & Security						
Technology Equity & Access						

The sections on the following pages provide overviews of the initiatives, with a listing of benefits, and proposed action.

## 1. Standardization and Technology Currency

As technology evolves, it is important to update equipment on a regular basis. New technologies often require additional capacity and computing power that older systems do not have. Guidelines for specific technology standards are intended to define the requirements to ensure availability, stability and efficient operations management of the college's essential technology systems. Over time, and in light of challenging funding and IT leadership vacancies, there is also an absence of several key policies and documented procedures in place for which have contributed to an inconsistent approach to maintaining unified and current technology solutions employed across the district campuses. In order to best support student learning it is critical that the district elevate its current level of technology to meet the expectations of both students and faculty/staff.

### Benefits:

- Improved educational environment for students, faculty, and staff.
- Reduced need for in support of aging equipment.
- Improved understanding of district utilization of funds for technology and the requirements to support cutting edge technology for educational environments. Established basis for decision-making related to technology issues.

### Proposed Actions:

- a. Conduct and develop a holistic and current inventory of deployed technology across all campuses which can be maintained effectively.
- b. Develop and implement a technology refresh plan which updates existing hardware with respect to priority, fiscal responsibility, and long-term cyclical sustainability.
- c. Create and utilize technology standards in the areas of classroom technology, staff and office equipment, software, web, and network management including wireless systems with a regular review cycle for updates reflective of industry trends.
- d. Identify and construct and/or update appropriate IT policies and procedures which integrate developed standards related to both acquisition and support of hardware technology. Several examples include: Service Level Agreements (SLAs), acquisition/purchasing process for new technology, etc.
- e. Revitalize district website presence such that it employs next-generation design, that is mobile-friendly, and meets accessibility standards (504/508 compliance).

## 2. Operational and Workflow Efficiencies

The business of higher education has changed from the past and should not be limited to administrative and back office functions, the business of higher education for today and the future demands focus on a blend of domains across the campus—from teaching and learning to strategic planning. Today's higher education administrators face increasing demands to be more effective and accountable when managing their institution. Today's budget challenges have all institutions looking to do more with less. Institutions of higher learning want to offer more and better services to students and staff, while at the same time reducing the institution's costs. Technology utilization is key to transitioning to a higher performing organization by improving operational and workflow efficiency.

### Benefits:

- More effective utilization of limited resources.
- Greater employment of data-driven decision making.
- Promotes professional development across the organization.

### Proposed Actions:

- a. Develop and implement survey instruments to regularly measure and gauge technology utilization and needs from areas representative of students, faculty, staff and administration.
- b. Conduct Business Process Analysis (BPA) for high-level organizational departments/divisions around the utilization of technology within existing job functions as deemed critical to the operation of the college.
- c. Implement application software projects to add efficiencies and improvement to organizational workflows such as: Ellucian Portal, Student Planning, Microsoft System Center, document imaging, enterprise-level workflow automation, catalog generation, customer retention management (CRM), student printing solutions, mobile application, online appointment systems, and web/video conferencing integration.
- d. Evaluate existing IT organizational structure and support models with a consideration of Total Cost of Ownership principles in determining staff requirements for existing and growing technology needs.
- e. Consider physical space needs for IT department including staff and data center with respect to future growth and support requirements.
- f. Identify and construct and/or update IT policies and procedures which address efficiencies and operational best practices such as: Service Level Agreements (SLAs), Change Management procedures, Inventory management, Project Initiation and Prioritization/Management, Accessibility plan, Backup and Retention/Restoration policies, Security plans, and Disaster Recovery Plans.
- g. Establish training opportunities for IT department staff and general campus faculty and staff in the utilization of technology resources.

### **3. Infrastructure and Access Improvement**

A telecommunication infrastructure is a combination of physical connections, hardware, and software that provide for the transmission and reception of voice, data, and video information and services. Planning for expansion of the telecommunication network is critical if the District continues to grow in both technology and facilities. A strong telecommunications infrastructure is an essential backbone to ensure that students, staff, and faculty have access to the best technology available for teaching, learning, and overall productivity.

#### Benefits:

- Readiness to support growing technology demands to support student learning.
- Reduces IT staff time devoted to supporting aging equipment and outdated network design.
- Allows for ability to employ cutting-edge technology solutions without unnecessary limitations or delay.

#### Proposed Actions:

- a. Upgrade the existing data center core to leverage more bandwidth for network growth and redesign for true redundancy through multiple circuits while consolidating less-powerful devices into a converged and scalable infrastructure model.
- b. Perform a fiber verification and upgrade for the main campus to update existing pathway diagrams and identify and replace poor performance areas with updated fiber or design.
- c. Develop and implement a plan to replace existing edge switching to current hardware and provide greater visibility to network traffic problems and reduce risk in operating aging and outdated equipment in critical buildings and service areas.
- d. Replace existing wireless access points with higher performance, next generation models to increase access.
- e. Explore options to leverage improved infrastructure to support projects related to enhanced campus communications, video collaborative integration, distance learning, and student engagement via technology.

#### **4. Safety and Security**

Protecting the assets of an institution – intellectual property, infrastructure, network, and computer resources – is becoming more important and more difficult with the rise in the number and sophistication of cyber threats as the network evolves to accommodate distance education, on-demand courses, social networking and global collaboration. IT staff face increasing challenges around cyber security issues. The institution needs to develop and implement a cyber security infrastructure; create a culture in which security roles and responsibilities are understood such as how to prevent breaches and how to address breaches when they occur as well as educate about the risks of social networking services. Security is not strictly an IT matter today; indeed, it is a foundation of any institution and is everyone's responsibility.

##### Benefits:

- Reduction of risk from malicious attempts to threaten vital institutional data and systems or loss via natural disasters.
- Avoid unnecessary financial loss or erosion of public trust through establishing appropriate safeguards for physical safety and cyber security.
- Safeguard the integrity of campus data and provide solutions for sustained business continuity.

##### Proposed Actions:

- a. Develop and implement a district IT security plan in conjunction with disaster recovery/business resumption procedures for critical applications.
- b. Expand campus video surveillance system.
- c. Implement advanced end-point protection system to reduce threat of cyber-attack and prevent exploits using known techniques which can bypass standard cyber security measures.
- d. Conduct regular, on-going cyber security awareness training for all faculty and staff as well as provide resources for students who interact with district technology systems.
- e. Evaluate public address systems for emergency warnings both indoors and outdoors on all campuses.
- f. Assess physical security and stability of primary server room (aka MDF) and all existing building connection areas (aka IDFs) on all campuses.

## 5. Technology Equity & Access

Technology can be a powerful tool for transforming learning. It can help affirm and advance relationships between educators and students, reinvent approaches to teaching & learning and collaboration, shrink long-standing equity and accessibility gaps, and adapt learning experiences to meet the needs of all learners. NVC will promote greater equity in education through use of effective technology and provide sufficient access to technology for students and staff.

### Benefits:

- Reduction of barriers to education using technology provided by the district in order to enhance student success.

### Proposed Actions:

- a. Provide needed hardware and software to students to checkout for use per semester.
- b. Provide needed hardware and software to staff to checkout for use.
- c. Develop a BP/AP for Accessibility compliance.
- d. Conduct evaluation of technology solutions to support growing mobile-first/remote work and learning environments.

## APPENDIX A

As a “living document” the following elements are components of the plan which are in continuous or regular review and exist as resources provided on the NVC website in the Institutional Technology department web pages. Given the gap between the former Technology Master Plan and the current plan, several of the resources below are still in development or in need of establishment as part of the charge of the Technology Committee in collaboration with the IT department staff.

- [Accessibility \(504/508/ADA Compliance\)](#)
- [Glossary of Technology Terms](#)
- Institutional Technology Governance
  - [IT Department Organizational Chart](#)
  - [District Technology Committee Role & Mission](#)
  - District Technology Committee Goals & Objectives
    - [2018-19](#)
    - [2019-20](#)
    - [2020-21](#)
  - [Academic Senate Technology Master Plan Preamble Statement](#)
- Institutional Technology Unit Plans
  - [2018-19 IT Unit Plan](#)
  - [2019-20 IT Unit Plan](#)
  - [2020-21 IT Unit Plan](#)
- Inventory of Technology
  - Classroom Equipment
  - [Computers](#)
  - Network Infrastructure
  - Printers
  - Specialized Equipment
- Procedures
  - [Computer and Network Use \(AP 3720\)](#)
  - [Equipment Procurement](#)
  - Network Access & Account Creation
  - [Network Account Deactivation](#)
  - [Specialty Technology Procurement](#)
  - Technology Project Initiation
- [Security & Disaster Recovery Plan Outline](#)
- Service Level Agreements (SLAs)
  - [Audio/Visual](#)
  - [Helpdesk](#)
- Standards
  - [Classroom Technology](#)
  - [Computers](#)

- Network Management
- Software
- [Specialty Technology](#)
- Website
- Wireless Hardware
- [Technology Refresh Strategy](#)
  - [2018 Fiscal Year Computer Refresh Proposal](#)
  - [2019 Fiscal Year Computer Refresh Proposal & Roadmap](#)
  - [2020 Fiscal Year Computer Refresh Proposal & Roadmap](#)
- Technology Surveys