



2022 - 2027

TECHNOLOG
MASTERS
DIPL

2022-2027
Technology Master Plan



HARTNELL COLLEGE

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Salinas, CA 93901

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Castroville Center
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Executive Summary

The purpose of the *Technology Master Plan* is to provide a roadmap for Hartnell Community College to apply technology and achieve its strategic plan goals. The *Technology Master Plan* considers technology trends and outlines how the district will leverage technology to meet students' technology needs and enable them to successfully transfer and earn degrees and/or certificates. As technology changes, the district needs to be able to maintain secure and reliable core services while proactively introducing new technical solutions to support the district's strategic goals.

Some of the key technology needs addressed in this plan include providing ongoing support for and upgrading of the student information system (SIS); implementing a technology refreshment plan; enhancing campus Wi-Fi; enhancing core network infrastructure, staffing, and security; and developing a disaster preparedness/recovery and cybersecurity response plan.

The Hartnell College *Technology Master Plan* is a living document that will be reviewed periodically by the Technology Development Council and updated as necessary. Major revisions of this document will be made based on updates to associated documents, such as institutional goals, strategic initiatives, and/or the college's mission. Ongoing meetings with individuals, shared governance committees, functional area groups, and campus-wide surveys will be used to continue gathering data.

During the planning process, objectives were identified and milestones set for a range of projects, including administrative system enhancements, classroom technology improvements, disaster recovery systems, and the further development of virtual services for remote learning. Given the current budgetary climate in Californian community colleges, the Information Technology Resources (ITR) Division is dedicated to preserving and improving technology and services while maximizing college resources.

District Mission, Vision, and Values

Mission

Focusing on the education and workforce development needs of communities in Salinas Valley, Hartnell College strengthens those communities by providing opportunities for students to achieve their career and/or academic goals (associate degrees, certificates of achievement, and transfers to four-year educational institutions) in an environment committed to student learning, achievement, and success.

Vision

Hartnell College students will be prepared to contribute as leaders to the intellectual, social, cultural, and economic vitality of our communities and the world.

Values

Values are the essential enduring tenets that guide Hartnell College in fulfilling its mission. They set forth what we believe, and they define how we conduct ourselves. Students are at the core of these values.

- **Students First:** We believe the first question that should be asked when making decisions is, "What impact will the decision have on student access, learning, development, achievement, leadership, and success?"
- **Academic and Service Excellence:** We commit to excellence in teaching and student services that develop the intellectual, personal, and social competence of every student.
- **Diversity, Equity, and Inclusion:** We embrace and celebrate differences and uniqueness among our students and employees. We welcome students and employees from all backgrounds.
- **Ethics and Integrity:** We commit to respect, civility, honesty, responsibility, and transparency in all our actions and communications.
- **Alliances:** We develop strategic relationships within the college and the local and global communities that allow us to grow our knowledge, expand our reach, and strengthen our impact on those we serve.
- **Leadership and Empowerment:** We commit to growing leaders through opportunity, engagement, and achievement.
- **Innovation:** Through collaboration, we seek to create new tools, techniques, programs, and processes that improve student learning, student achievement, and institutional effectiveness.

- **Stewardship of Resources:** We commit to the effective utilization of human, physical, financial, and technological resources.
- **Health, Safety, and Security:** We commit to providing a healthy, safe, and secure environment for all students, employees, and visitors.

District Strategic Goals and Objectives

Goal 1: Increase Student Completion

The completion agenda is a national priority for institutions of higher education and is particularly critical for community colleges that serve widely diverse students, including ethnic minorities, first-generation college students, and otherwise underserved students. Although over the past several years, the college has greatly increased the number of students who earn awards annually, many students withdraw part way through their courses or struggle to complete their studies. Hartnell College is fully committed to increasing student completions.

Goal 2: Increase Student Completion Efficiency

For students who complete their studies at community colleges, the amount of time it involves is frequently excessive, and the number of credits they accrue during their studies is substantially more than required to earn their awards. Through funding leverage, an increasing number of states, including California, are balancing student access with a concerted emphasis on accountability for student success. Students who need to prolong their tenure at the college suffer opportunity costs due to delays in transferring to four-year institutions, full-time employment, and/or enhanced career opportunities. Hartnell College is fully committed to increasing student engagement and success.

Goal 3: Increase Student Transfers to Four-Year Institutions

For many students, completing an associate's degree or substantial coursework provides an important stepping-stone to a baccalaureate degree or potential graduate degree. Over the past several years, the college has substantially increased the number of students who transfer annually to four-year institutions. Students who are not effectively coached on their transfer options early in their studies may not engage in the most beneficial learning experiences prior to transferring or transitioning successfully to higher-level educational opportunities. Working with partner institutions,

Hartnell College is fully committed to increasing student transfers to four-year institutions.

Goal 4: Improve Student Employment Following Training or Completion

For many students, completing substantial coursework, a certificate, or an associate’s degree provides a robust career pathway to full-time employment or improved career prospects within certain industries. Students who are not directed toward career placement options early in their studies may not fully engage with their studies or be optimally prepared for their future employment. Working alongside regional employers, Hartnell College is dedicated to improving student employment opportunities following training or completion.

The Technology Development Council (TDC)

The TDC was established in 2013 as a focused participatory governance council. The TDC identifies and prioritizes campus-wide information technology (IT) needs, reviews and recommends technology policies, and maximizes opportunities to support Hartnell College’s mission.

The TDC is co-chaired by the vice president of ITR and the systems and technology librarian. The council comprises 15 members representing all campus constituents—students, faculty, and administrative staff.

The council reviews and prioritizes IT proposals submitted during the annual campus budgeting process. The TDC’s recommendations for funding are considered by the College Planning Council and the President’s Cabinet.

| NAME/TITLE/COUNCIL POSITION | REPRESENTING |
|--|--------------------------------|
| Sharon Albert, assistant dean of CTE and workforce development | Administration |
| Mayra Almodovar Lopez, ECE faculty | Academic Senate |
| Diane Harley, ESL/English faculty | Academic Senate |
| Carol Hobson | Distance education coordinator |
| Carla Johnson, dean of student affairs | Administration |
| Balamurali Kappagantula, director of ITR | Administration |
| Elizabeth Morales, business faculty | Academic Senate |

| NAME/TITLE/COUNCIL POSITION | REPRESENTING |
|---|---|
| David Orta, student | Associate students |
| Nicholas Pasquale, math faculty | Academic Senate |
| Chelsy Pham, vice president of information and technology resources (chairperson) | Information and technology |
| Lupita Rodriguez, student | Associated students |
| Deborah Stephens, systems/technology librarian (co-chairperson) | Academic Senate |
| David Techaira, accounting manager | Classified manager, supervisory, confidential |
| Ana Valles, technician (financial aid) | Classified |
| Cecilia Vazquez, financial aid specialist | Classified |
| Nancy Wheat, biology faculty | Academic Senate |
| Vacant | L-39 |

ITR Mission & Vision

Mission

Establish and maintain an equitable, barrier-free digital teaching and learning environment that enables students to advance their educational goals, develop new skills, and prepare to live and work in the global community.

Vision

Provide innovative technology solutions that facilitate learning, empower students to succeed, and improve our communities.

Guiding Principles

The guiding principles of the technology plan are as follows:

1. *Optimization*: Prioritize the use of technologies that advance student success, teaching, learning, and support.
2. *Student Success Technologies*: Through an institutional approach, strategically leverage technology to improve student outcomes.
3. *Analytics and Business Intelligence*: Develop an easily accessible data infrastructure and business intelligence model to support intuitional priorities.

4. *Security Strategy*: Conduct risk-based security evaluations to ensure ongoing security threat detection, responses, and prevention. Implement and maintain infrastructures that ensure the security of data and IT assets.
5. *Sustainable Professional Development and Technology Training*: Establish and implement a sustainable training program for faculty, administrative staff, and students.

Digital Equity

There are three pillars of digital equity: access to the Internet, access to technology, and digital literacy.

Access to the Internet

Action items are integrated throughout the *Technology Master Plan* to increase secure access to the Internet for students, faculty, and administrative staff. With the increase in Internet of Things (IoT) smart devices, access to the Internet is a critical tool for enabling bidirectional connections between devices and selected applications.

The change to remote learning driven by the COVID-19 pandemic exposed many students' to a lack of access to the Internet at home. Like many community colleges supported by Higher Education Emergency Relief Fund (HEERF) funding, Hartnell College implemented a technology program to provide students with hotspots and Chromebooks at no cost. Since HEERF is scheduled to end shortly, the district plans to develop a strategy to ensure students' sustainable access to the Internet, in addition the District is working with the City of Salinas on a city wide broadband project to help connect the community with affordable internet access.

Access to Technology

Access to technology is challenging for many students. Besides cost, parents who have not grown up with technology may fail to understand the key role of technology in the learning experience. Although students had access to computer laboratories on campus, Chromebooks were made available to students during the pandemic to support online courses, which was a small step toward providing all students with access to technology. In partnership with the Foundation and Student Affairs laptops are being provided to students as part of the Salinas Valley Promise program.

Digital Literacy

Access to the Internet and technology, and the ability to navigate, use, and consume technology, are fundamental components of digital literacy. As services in the community become increasingly dependent on technology, consumers need to live, learn, and work in a community with widespread access to digital information. Advances in technology also make it vital to learn about and recognize cybercrime to facilitate the effective and safe use of technology.

Technology Landscape

Emerging from the COVID-19 crisis, it is difficult to accurately predict what the next five years will bring. This *Technology Master Plan* aims to provide a planning pathway that recognizes the need for agility and responsiveness to change going forward.

The *Technology Master Plan* Framework

The technology plan is divided into 10 core sections:

1. ITR organizational structure
2. Network, infrastructure, and security
3. Site technology
4. Website
5. Academic affairs technology
6. Student affairs technology
7. Administrative services technology
8. Human resources technology
9. Institutional research technology
10. Disaster recovery and business continuity

Each section describes the current state, desired state, plan, lead(s), and indicators of success for each area.

Section 1: ITR Organizational Structure

ITR Division

The ITR Division provides leadership in technology to support the needs of the district. The vice president of ITR oversees the ITR Division, which has two departments: Enterprise Applications and Technology Resources. A current organization chart for the ITR Division is provided in the Appendix C.

Administrative Support/Help Desk

The help desk is currently staffed by an Admin Assistant IV. Besides supporting the help desk, the Admin Assistant also handles payroll and

timekeeping duties, manages purchase orders, and assists with the division's budget.

Technology Resources

The Technology Resources Department is staffed with a network administrator, two network technicians, two IT specialists, and three support technicians. The Technology Resources Department supports:

- help desk tickets
- classroom/conference/event audiovisual facilities
- classroom/laboratory technology
- study areas
- technology purchase orders
- asset management
- server management
- network management
- telecom/Voice over IP (VoIP)
- Campus Wi-Fi
- keyless entry application management
- security camera/blue phone technology management

The ITR team supports all five district locations.

Enterprise Applications

Staffed with a director of ITR (enterprise), three programmer analysts, one web administrator, and one software support specialist, the Enterprise Application Department supports:

- the Colleague SIS regarding:
 - admissions and records
 - financial aid
 - scheduling
- the Canvas learning management system (LMS)
- the payroll system
- the purchasing system
- the human resources system
- database administration
- production scheduling
- the college website
- integration with third-party software
- Chancellor's Office reporting (MIS, IPEDS)

Accreditation Standards: [III.C.1](#), [III.C.2](#), [III.C.3](#)**Current state**

In the last two years, the district has expanded its centers into three cities: King City, Castroville, and Soledad. Prompted by the COVID-19 pandemic, the district adopted remote working with the expectation that an online work environment and technologies to support this new environment would be provided by the district's ITR Division. Also, students became online learners, further taxing the ITR Department's capacity and resources. The shift to online working has impacted and will continue to impact ITR service delivery and drive infrastructure, security, and cloud service delivery decisions.

On-campus operations are expected to resume shortly, but the college's online operations will remain extensive, and college personnel will become agile mobile workers.

Desired state

Technology to support new workplaces (onsite, online, or hybrid) and new teaching and learning environments (physical and virtual) must be stabilized for students, administrative staff, and faculty, and staffing levels for ITR will be balanced against the workload across physical and virtual environments. A director of information security and technology resources has joined the team to meet the demand, support the Technology Resources team, and oversee the district's cybersecurity efforts.

Plan

a) Hire a director of information security and technology resources

b) Establish a formal project portfolio management process

A formal project portfolio management process and culture will increase transparency, facilitate priority tracking, and improve communication across the district.

c) Enhance information technology service management (ITSM)

Enhance the IT help desk ticketing system to provide a user-friendly experience for users and technicians to track workload and ticket statuses. The Information Technology Service Management (ITSM) system will provide dashboards to help manage and monitor workloads.

d) Develop a self-service knowledge base

Provide self-service tools/knowledge and quick user support tips for common IT questions.

e) Enhance the help desk

Equip the help desk with call routing/queuing (hunt group) to enable callers to leave messages or hold for an available help desk support technician.

f) Conduct staff/resource evaluation

Balance staff workloads to accord with Gartner industry standards.

Lead: ITR

Indicators of success

- *Items 1a, 1b, and 1c* will be measured using an IT satisfaction survey.
- *Item 1e* will be measured based on Gartner and community college workload comparison(s).

Technology and Professional Development

Accreditation Standards: [III.C.4](#)

Current state

ITR professional development needs to be supported by an instructional technologist through the district LMS, instructional videos, technology training, and the Professional Development Center. This position has been vacant since February 2022. The district recently received guidance from the Institutional Effectiveness and Partnership Initiative (IEPI), which included recommendations to modify/increase professional development across all constituent groups.

Desired state

An inclusive professional development program to foster technical and soft skills across all constituent groups and meet professional development needs.

Plan

a) Review the current job description for an instructional technologist
Review the job description for the instructional technologist and revise it to support professional development/training needs and IEPI recommendations.

b) Review and develop an organizational structure for professional development

Evaluate the areas of the district to oversee, coordinate, and execute professional development that includes technical skills, soft skills, instructional design, etc.

c) Develop a professional development plan

Work with constituent groups to develop a comprehensive professional development plan and a template/calendar for training topics.

Lead(s): Human Resources (HR), Information Technology Resources (ITR), Academic Affairs (AA), Student Affairs (SA), Advancement and Development AD

Indicators of success: Items a, b, and c will be measured using a survey.

Asset Life Cycle Management

Accreditation Standards: [III.C.2](#), [III.C.3](#)

Current state

Life cycle management of the district's assets is essential for forecasting and planning the district's technology needs, from infrastructure and software to laptops and wireless access points. Asset management and forecasting are critical for budgeting, determining the total cost of ownership (TCO), and maintaining up-to-date technology. Life cycle management has not, so far, been successful due to limited resources.

Desired state

Asset management of hardware, software, and subscription life cycles to support core operations, with reports and dashboards for tracking numbers, locations, and costs, and predictive analytics for budgeting and evaluating TCO.

Plan

a) Take an inventory of all technology hardware assets

Conduct a manual inventory of technology assets, including make, model, serial, cost, and date of acquisition. Devices to include cameras, laptops, desktops, servers, etc.

b) Catalog all software assets

Catalog software assets, subscriptions, and maintenance agreements.

c) Procure an asset management system for asset portfolios

Procure an asset management system to facilitate asset tracking from purchase to retirement. The system should function as a single source for tracking the current, ongoing, and future costs of all assets.

d) Develop an asset management system, framework/policies, and procedures

Develop policies and procedures for asset procurement, requests, approvals, refreshment, and retirement.

Lead: ITR

Indicators of success: IT survey results

Section 2: Network, Infrastructure, and Security

Network Connectivity

Accreditation Standards: [III.C.2](#), [III.C.3](#)

Current state

With the support of T-bonds, Hartnell College has expanded to five locations across the district. As modernization continues, network connectivity is falling behind at all locations. The district is currently relying on a single Internet connection with no redundancy. The district currently allows for unrestricted use of the student Wi-Fi network, which undermines services.

Desired state

All district locations will have high-speed Internet with redundancy and backup for emergencies. The network will be optimized for availability and speed. The district's network will be managed through a software-driven wide area network (SD-WAN).

Plan

a) Partner with the Corporation for Education Network Initiatives (CENIC) and the Chancellor's Office

Work with the Chancellor's Office to install the Internet at all district locations. The installations will include a line for redundancy.

b) Evaluate the need for back-up cellular service

Besides Internet lines, backup cellular technology may be required, depending on the environment and requirements.

c) Develop policies/processes for district Wi-Fi use

Through a collaborative process, develop policies and procedures for district Wi-Fi usage.

d) Optimize/manage Wi-Fi traffic

Implement a process to ensure Wi-Fi efficiency.

e) Shift to a modern software-defined wide area network (SD-WAN)

An SD-WAN model will give ITR the ability to oversee the network across the five campuses using cloud technology.

Lead: ITR

Indicators of success: review of network traffic reports for the Wi-Fi system and an IT survey

Infrastructure

Accreditation Standards: [III.C.2](#), [III.C.3](#)

Current state

The district's infrastructure requires modernization to support increasing numbers of programs, multiple locations, and technological changes.

Desired state

A strategically planned and scalable modern infrastructure.

Plan

a) Evaluate and document the current infrastructure

Review, document, and map the current infrastructure with inputs/outputs and dependencies.

b) Identify gaps in the current infrastructure

Gaps should highlight areas where performance or platforms can be improved to increase performance and gain efficiency.

c) Develop an infrastructure framework

The architecture of the infrastructure needs to be scalable to meet current and anticipated future needs.

d) Develop an implementation plan for modernization of the infrastructure

Prepare a plan that includes budget and operational impacts, costs, and benefits for modernization.

Lead: ITR

Indicators of success: optimized performance and decreased staff maintenance

Security

Accreditation Standards: [III.C.3](#), [III.C.4](#)

Current state

Information security is critical in IT. With businesses, the government, and our neighboring colleges experiencing increasing numbers of network and system breaches, information security should be a high priority for the district. The district needs to develop its security infrastructure and develop an information security awareness culture.

Desired state

Cybersecurity will become part of the district's culture. Students, faculty, and administrative staff will have a heightened awareness of information security and its critical role in preventing security breaches. The district will adhere to the five elements of the National Institute of Standards and Technology (NIST) cybersecurity framework (i.e., identify, protect, detect, respond, and recover).

Plan

a) Establish a cyber and information security workgroup

Establish a cross-functional workgroup charged with oversight of and accountability for the district's cyber and information security strategy.

b) Implement an information security training program for students, faculty, and administrative staff

Conduct annual cyber and information security training.

c) Develop a security breach response plan

Develop a comprehensive security breach plan that includes communication, analysis, mitigation, recovery, and improvement.

d) Develop information security policies and procedures

Develop security policies that incorporate information protection processes and procedures.

e) Develop standard operating procedures

Develop standard operating procedures that include the security maintenance of software and hardware, including the detection and monitoring of systems.

f) Test, train, and conduct exercises

Conduct tests, training, and exercises to familiarize staff members with their roles and responsibilities if a security breach occurs.

Lead(s): ITR, HR, marketing

Indicators of success: feedback on training and exercises

Section 3: Site Technology

The district has five locations, and each location offers courses that require a unique technological environment.

Salinas Main Campus: The main campus hosts several programs, including nursing, STEM, athletics, and art.

Alisal: This campus hosts high school equivalency (HEP), K-12 STEM, computer science in three years (CSin3), welding, manufacturing and mechatronics, plant science, agricultural business, food safety, farm worker education, construction management and architecture, and automotive and diesel programs.

King City and Soledad Education Center: This center focuses on computer science courses.

Castroville: This site houses the plant science, GE certification, and planned engineering (2023–2024) cohorts.

Accreditation Standards: [III.C.2](#), [III.C.3](#)

Current state

The technology at each site varies in age and function. Some programs have expanded and require upgraded technology solutions, and industries are moving toward digitization, automation, and robotics. However, the technology infrastructure at the sites is currently inadequate for supporting the changing/growing demands.

Desired state

Future-focused technology infrastructure at all district locations. Technology will support the programs offered at each location and will be reviewed annually.

Plan*a) Establish baseline technology and identify gaps*

Establish inventory and baseline technology based on identified gaps to support all programs offered.

b) Develop technology planning

Establish a workgroup to ensure that technology meets program and future employment needs.

Lead(s): ITR, AA

Indicators of success: IT survey

Section 4: Website

Accreditation Standards: [III.C.1](#), [III.C.3](#), [III.C.4](#), [III.C.5](#)

Current state

The district's current website houses information for potential students, students, faculty, staff, and the community. The website includes items that must be made publicly available. The district is in the process of evaluating and redesigning the website based on the Chancellor's Office Vision for Success and the Guided Pathways initiative.

Desired state

A refreshed district website will focus on prospective students and the community, with portals for current students and employees.

Plan*a) Establish website redesign workgroup*

Establish a cross-functional workgroup charged with oversight of and accountability for the new website.

b) Research & Discover

Gather current and prospective student feedback about website navigation and information search methods.

c) Create website prototypes

Create a prototype for a new website and conduct pilot testing with students, staff, and the community.

d) Launch and manage a new redesigned website

Before the new site formally goes live, a process for managing the site will be developed to maintain the site for growth.

Lead(s): ITR, IR, marketing, SA

Indicators of success: website traffic and surveys

Section 5: Academic Affairs Technology

Distance Education

Accreditation Standards: [III.C.1](#), [III.C.3](#), [III.C.4](#)

Current state

Distance learning is provided through the Canvas LMS. The district currently has no formal Canvas training or support program.

Desired state

The Professional Development Center (PDC) supports distance and on-site education, and offers services, training, and guidance to faculty, classified professionals, and managers in areas related to, but not limited to, Canvas LMS, the Office suite, Google, and other emerging technologies, as well as best practices, pedagogy, and accessibility.

Plan

Develop distance education and professional development strategies

Lead(s): AA, SA, ITR

Indicators of success: to be determined based on the strategy

Library Study Rooms

Accreditation Standards: [III.C.1](#), [III.C.2](#), [III.C.3](#)

Current state: the library student study rooms are in need of a technology update. As students return to campus and start doing group projects on digital platforms library study rooms provide a space and tools for students to do that on campus.

Desired state: For the smaller study rooms a 55" monitor (9). For the larger study rooms interactive displays (9).

Plan:

- a) *Determine infrastructure needs in the study rooms.*
Review data and power connections in each of the study rooms to determine technology readiness.
- b) *Purchase and install equipment*

Lead(s): ITR, AA/LLR

Indicators of success: Student study rooms have monitors or interactive displays.

Video/Audio Recording room

Accreditation Standards: [III.C.1](#), [III.C.2](#), [III.C.3](#)

Current state: the district does not have a modernized video audio recording room for students and staff.

Desired state: have a modern updated library video editing room in a – 156. Have a modern employee video audio recording room in the PDC video room.

Plan:

- a) *Develop plan to modernize video editing and recording room for students and employees*

Work with instructional faculty who are teaching media to outfit the rooms with tools that they are using in the teaching and learning environment.

b) Procure and install the modern video editing and recording room

Lead(s): ITR, AA/LLR

Indicator(s) of success: IT Survey, audio / video rooms installed

Course Scheduling

Current state: Scheduling is typically done two terms ahead. The scheduling team determines the courses to schedule based on manual lookups of past data. The district does not have predictive scheduling tool to support scheduling of classes.

Desired state: Use the data from student planning to determine course demand and schedule accordingly.

Plan:

a) Review current application and identify gaps

Review current scheduling application identify gaps and work with vendor to enhance application to support scheduling function.

b) Implement application gaps

Lead(s): ITR, AA

Indicators of success: Scheduling workflow improvements

Section 6: Student Affairs Technology

Degree Audit

Accreditation Standards: [III.C.1](#), [III.C.2](#), [III.C.3](#)

Current state

Currently, students have no easy way to track their progress toward their goals or degrees. Additionally, Hartnell College's admissions and records (A&R) degree evaluators must perform degree audits manually to determine whether students have met their graduation requirements.

Desired state

A degree audit system will automate A&R processes and help students track their progress and maintain their motivation. When degree audits have been implemented, additional enhancements can be added, such as a student “what-if” web-based degree planning tool, reporting for auto-awarding of degrees, and student progress prompting.

Plan

Review the degree planner in Colleague

Review the Colleague degree planner and determine whether it will fulfill the students’ needs.

Lead(s): SA, ITR

Indicators of success: an integrated degree planner and schedule implementation

Student Email

Accreditation Standards: [III.C.1](#), [III.C.4](#), [III.C.5](#)

Current state

A Google email account and associated services (drive, sheets, docs, etc.) email are currently automatically issued upon entry of a prospective student’s application into the SIS. There is currently no end-of-life termination for student email accounts. Google has in the past been free of charge for education; however, starting in 2023, Google will start charging fees for its services. Over 1,000 dormant email accounts currently consume petabytes of data.

Desired state

Defined student account life cycles with processes and policies to ensure student success and prevent abuse of district resources.

Plan

Develop and implement a student email life cycle plan

Student email life cycles will provide access to the tools required for success at Hartnell, besides balancing security, safety, and district resources.

Lead(s): SA, ITR

Indicators of success: student accounts issued and used by students and terminated at the end of their life cycles

Early Alert System

Accreditation Standards: [III.C.2](#)

Current state

The current early alert application adoption rate is low among staff and faculty. The current early alert system lacks cohesive communication integration, and parts of the application are updated manually by the Student Affairs and ITR Departments.

Desired state

An early alert system with a comprehensive communication platform will help students who are at risk of not meeting their goals and need additional support. The early alert system should have dashboards and reports to allow the district's student-serving departments to work together to support students on their educational paths.

Plan: Review and implement an early alert solution.

Lead(s): ITR, SA

Indicators of success: increase in student success rates

Hartnell Student Mobile App

Accreditation Standards: [III.C.1](#), [III.C.2](#), [III.C.3](#), [III.C.4](#), [III.C.5](#)

Current state

The district currently uses an Ellucian mobile application called Ellucian Go, which enables students to find Hartnell College student portal and use certain mobile features. The application is not widely used and does not function well.

Desired state

An official Hartnell application that will incorporate information from the SIS, integrated communication, and resource tools for students.

Plan

a) *Explore platforms for official Hartnell apps for students*

Explore a platform-as-a-service (PaaS) solution for integration with the district SIS and early-alert tools.

b) *Implement a Hartnell application for students*

Implement a smartphone app for Android (Google Play) and iOS (Apple) that works on multidevice, (phone, tablet, and Chromebook).

Lead(s): ITR, SA

Indicators of success: IT survey

Section 7: Administrative Services Technology

Procurement

Accreditation Standards: [III.C.2](#)

Current state

The district's current procurement application is at the end of its life. The district needs a modern procurement application that will integrate with the district's Colleague system.

Desired state

A modern procurement system that integrates purchasing, receiving, and payment processes.

Plan

Develop an Request for Proposal (RFP) for a procurement application

Review the procurement business processes and develop an RFP for a new procurement application that can be integrated with current systems.

Lead(s): ITR, AS

Indicator of success: an awarded RFP

Facilities and Work Order System

Accreditation Standards: [III.C.2](#)

Current state

Facilities and maintenance currently share a work order/ticketing system with the ITR Department. The current work order system is not user-friendly and does not facilitate basic reporting. Work orders are sometimes sent by email and are difficult to track and monitor. Many work orders require a collaborative effort between ITR and facilities personnel.

Desired state

An integrated work order application (ITSM) for the ITR and Facilities Departments that is user-friendly and has reporting capability.

Plan

- a) *Explore integrated work order systems for the ITR and Facilities Departments*
- b) *Implement a new work order system for the ITR and Facilities Departments*

Lead(s): ITR, Facilities, AS

Indicators of success: IT survey

Section 8: Human Resources Technology

Requisitions, Application Tracking, and Onboarding

Accreditation Standards: [III.C.2](#)

Current state

The HR application process is mostly manual, with no automation. The foundation software of the current HR application is proprietary and difficult to configure. This places a burden on human resources to track and monitor candidates. The application has limited reporting capabilities and is not user-friendly, which results in calls to HR from potential applicants.

Desired state

An effective HR system that allows for higher levels of self-service and automation, increasing the time to hire. Also, a technology-supported onboarding system with reporting capability. The new application system should facilitate the committee process for higher education hiring.

Plan: *Implement NeoEd/NeoGov as the new HR application system*

Lead(s): ITR, HR

Section 9: Institutional Research Technology

Business Intelligence

Accreditation Standards: [III.C.2](#)

Current state: The district's IR department does not have sufficient reporting tools to support the districts demand for data and reporting.

Desired state: Visual and predicative analytical toolbox that enables IR to do deep dive reports and self-service reporting capabilities.

Plan:

- a) *Explore data warehouse and analytics tools.*
- b) *Implement data warehouse and analytics tools and provide training to end users*

Lead(s): ITR, IR

Indicators of success:

Section 10: Disaster Recovery and Business Continuity Plan

The purpose of a *Business Continuity and Disaster Recovery Plan* is to help the district ensure continuity of its critical functions if a disruptive event or emergency occurs and to define the process for rebuilding operations after the disaster has passed.

The *Business Continuity and Disaster Recovery Plan* should address adverse operating conditions, such as localized threats (e.g., earthquakes, fires, floods, or bombs) and global threats (e.g., an influenza pandemic). The goal of this plan will be to maintain, resume, and recover the district's critical functions if such an event occurs.

Accreditation Standards: [III.C.1](#), [III.C.3](#)

Current state

Currently, the district has no formal *Business Continuity and Disaster Recovery Plan*.

Desired state

Through collaborative planning, the district will develop a comprehensive *Business Continuity and Disaster Recovery Plan*. The plan will address how the district can prepare to continue operations despite adverse events or, if operations cannot continue, how the district can resume operations as quickly as possible. The plan should map out the restoration of normal operations and failed facilities or equipment using minimal resources. The plan will be integrated with all other district plans, such as the *Emergency Operations Plan*, department continuity plans, and all applicable policies and procedures.

The plan should be reviewed annually and updated to include any changes in key resources (as well as contact information), new dependencies, changes in levels of criticality, and updates to operating procedures.

Plan

a) Establish a business continuity and disaster recovery workgroup

Establish a cross-functional workgroup charged with developing the district's comprehensive *Business Continuity and Disaster Recovery Plan*.

b) Identify vulnerabilities and document processes

Identify vulnerabilities and develop plans for alternatives before a disaster strikes.

c) Prioritize critical functions and develop department continuity plans

Departments should identify how critical functions will continue with reduced resources, resource requirements, and functional dependencies. To begin identifying a department's critical functions, the following questions should be considered:

- What activities are normally performed by your department or unit?
- Overall, what does your unit do?
- What action words accurately describe the purpose of your department?
- What service(s) does your department provide? What is delivered to the campus as a result?

d) Testing, training, and exercises

Conduct tests, training, and exercises to familiarize staff members with their roles and responsibilities during an emergency, ensure that systems and equipment are maintained in a constant state of readiness, and validate

certain aspects of the plan. Testing equipment and systems should be an ongoing effort.

Lead: ITR

Indicators of success: successful pilot test without process modifications

DRAFT

Appendix A: Accreditation III C—Technology Standard

Standard III.C.1: Technology Resources

- 1. Technology services, professional support, facilities, hardware, and software are appropriate and adequate for supporting the institution's management and operational functions, academic programs, teaching and learning, and support services.**

POSSIBLE SOURCES OF EVIDENCE: technology plans or program reviews that evaluate and plan for reliability, disaster recovery, privacy, and security; technology inventories; technology infrastructure blueprints; disaster recovery procedures or plans.

Review criteria and possible sources of evidence for the DE/CE technology plan and/or other documents that demonstrate the institution is aligned with this Standard.

REVIEW CRITERIA: The institution ensures that its various technology needs are identified.

The institution regularly evaluates the effectiveness of its technology in meeting its range of needs.

There are provisions for reliability, disaster recovery, privacy, and security, whether technology is provided directly by the institution or through a contractual arrangement.

The institution makes decisions about the use and distribution of its technology resources.

The technology infrastructure is sufficient to maintain and sustain traditional teaching and learning and DE/CE offerings.

FOR INSTITUTIONS THAT OFFER BACCALAUREATE DEGREES

The technology services, support, facilities, hardware, and software utilized by the baccalaureate programs are appropriate and adequate.

Standard III.C.2: Technology Resources

2. The institution continuously plans for, updates, and replaces technology to ensure its technological infrastructure, quality, and capacity are adequate for supporting its mission, operations, programs, and services.

POSSIBLE SOURCES OF EVIDENCE: technology plans (short-term and long-range); documentation for technology replacement, repair, and/or upgrading cycles; employee and student survey instruments (with technology questions); analysis of the results of such surveys; examples of program reviews from other divisions, departments, or units that include technology resource requests; and/or other documents that demonstrate the institution is aligned with this Standard.

REVIEW CRITERIA: The institution has established provisions to ensure that a robust, current, and sustainable technical infrastructure is maintained that provides maximum reliability for students, administrative staff, and faculty.

The institution bases its technology decisions on the results of the evaluation of program and service needs.

Evaluations of technology and technology services include input from end users.

The institution has developed a process to prioritize needs when making decisions about technology purchases.

Standard III.C.3: Technology Resources

3. The institution ensures that technology resources at all locations where it offers courses, programs, and services are implemented and maintained to ensure reliable access, safety, and security.

POSSIBLE SOURCES OF EVIDENCE: technology replacement, repair, or upgrading cycles that highlight “all locations”; technology replacement and/or repair logs that highlight “all locations”; technology help request protocols, including access for employees at “all locations”; and/or other documents that demonstrate the institution is aligned with this Standard.

REVIEW CRITERIA: The institution allocates resources for the management, maintenance, and operation of its technological infrastructure and equipment.

The institution provides an appropriate system for reliability and emergency backup.

Standard III.C.4: Technology Resources

4. The institution provides appropriate instruction and support for faculty, administrative staff, and students in the effective use of technology and technology systems related to its programs, services, and institutional operations.

POSSIBLE SOURCES OF EVIDENCE: technology training schedules for staff and faculty; presentations or agendas on technology professional development opportunities; evaluations of training, and documentation of improvements to subsequent training for staff and faculty; technology training schedules for students; curricula for training students on technology usage; resources, such as manuals or online instructions, that support students, administrative staff, and faculty in their use of technology; and/or other documents that demonstrate this institution is aligned with the institution.

REVIEW CRITERIA: The institution assesses the need for IT training for students and personnel.

The institution allocates resources for IT training for faculty, students, and staff.

The institution regularly evaluates the training and technical support it provides to faculty and staff to ensure that the programs are appropriate and effective.

Standard III.C.5: Technology Resources

5. The institution has policies and procedures that guide the appropriate use of technology in teaching and learning processes.

POSSIBLE SOURCES OF EVIDENCE: policies or procedures for acceptable use of technology; publications containing acceptable use policies or guidelines, such as employee handbooks, student handbooks, etc.; other forms of acceptable use guidelines, such as posters in computer laboratories; and/or other documents that demonstrate that the institution is aligned with this Standard.

REVIEW CRITERIA: The institution has established processes to make decisions about the appropriate use and distribution of its technology resources.

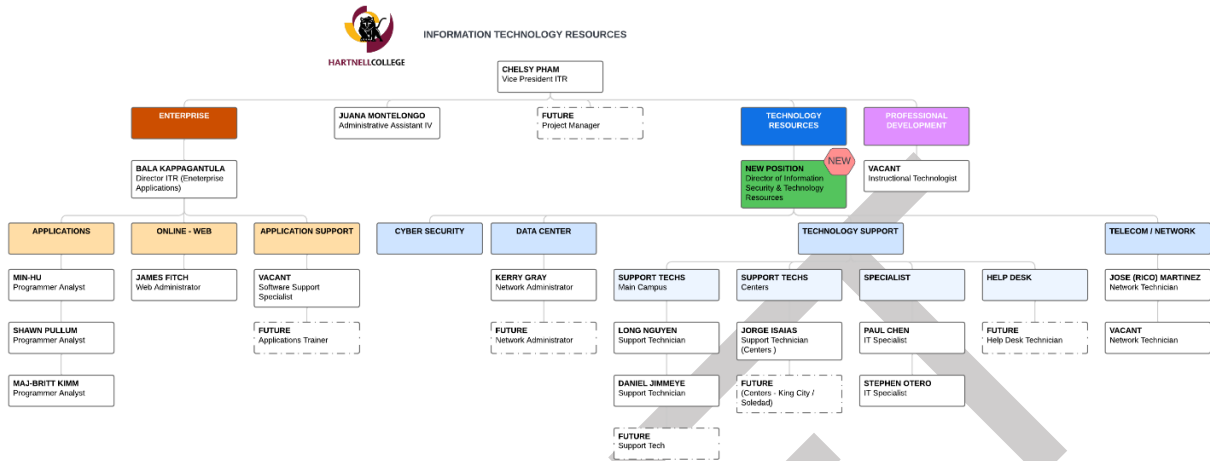
The institution publicizes these policies and processes.

DRAFT

Appendix B: ITR Program Review

| Department /Program | Priority within Category | Description of Request | Activity |
|---------------------|--------------------------|--|---|
| ITR | 1 | 1 FTE | Hire a director of information security & technology resources |
| ITR | 2 | Consulting services | All-campus security camera assessment and RFP |
| ITR | 3 | Consulting services | Cyber security assessment and recommendations |
| ITR | 4 | Consulting services | Wide area network (WAN)/data center/disaster recovery /assessment and RFP |
| ITR | 5 | Contract services | Cloud servers |
| ITR | 6 | HR application | Recruiting platform |
| ITR | 7 | Early alert application | Early alert platform (advising, planning, student resources, scheduling) |
| ITR | 8 | Amazon web services (AWS re-invent)/data science exploration | Amazon web services (AWS re-invent)/data science exploration |
| ITR | 9 | 1 FTE | Technology trainer |
| ITR | 10 | 1 FTE | Help desk specialist |

Appendix C: ITR Organization Chart



[Link to the online version of the ITR organization chart](#)

Appendix D: Technology Plan Road Map

[Link to Technology Plan Road Map](#)

Appendix E: Business Continuity Plan Criteria

Critical functions are prioritized based on the level of criticality following a disaster and whether they must be continued under any and all circumstances. Functions should be prioritized based on the following table of critical functions:

| CRITICALITY LEVEL | DESCRIPTION |
|-------------------|---|
| 1 | Must be continued with a normal or increased service load. Cannot pause. Necessary to life, health, and safety. |
| 2 | Must be continued, if at all possible, although perhaps in a reduced mode. Pausing completely will have grave consequences. |
| 3 | May pause if forced to do so but must resume in 30 days or sooner. |
| Deferrable | May pause; resume when conditions permit. |

While all functions are vital for the successful fulfillment of the district's mission, some are more time-critical than others. During an emergency that requires the activation of the *Business Continuity and Disaster Recovery Plan*, some functions will be suspended to accommodate more urgent

functions. All functions will ultimately be continued as the campus returns to normal operations.

While developing the plan, departments should consider the following:

- operating at an alternate location
- continuing without the data network
- continuing with a reduced workforce
- how communications will work without email
- line of succession and delegation of authority
- continuing education (how will instruction continue?)
- special considerations

Operational checklists should also be developed. Checklists may be designed to list the responsibilities of a specific position or the steps required to complete a specific task. Sample operational checklists may include:

- phone trees
- key personnel rosters and critical functions checklists
- critical function recovery team checklists
- telecommute/alternate work location checklists
- emergency operating records and IT checklists
- emergency equipment checklists

Appendix F: Board Policies and Procedures

[AP 3720 Computer, Electronic Communication, and Network Use](#)

Appendix G: IT Survey

[Draft of IT Survey](#)

References:

1. Strategic plan
2. Facilities master plan
3. IEPI