



Cuero ISD

Technology Plan

2019-2023

Approved by the Board: December 19, 2019

The Cuero ISD technology plan is intended to be a living, working document. It will be reviewed annually, and updated as needed.

Technology Planning Committee Members: DPOC members

Executive Summary:

Knowing that our students' learning experiences need to be based upon real-world experiences and global collaboration, the Cuero Independent School District plans to create technology-rich school environments that are connected to engaging learning opportunities. Students and staff will experience the benefits of increased productivity and achievement through the utilization of emerging technologies. Parents will continue to enjoy the enhanced ability to interact with the school through multiple communication tools and to view their child's educational progress.

The Cuero Independent School District Plan for Technology is intended to cover all aspects of the use of technology in the district over the next five years and is based upon the district's vision to empower all students to reach their potential and become responsible, respectful citizens by teaching an enriched curriculum using all available resources. This Cuero ISD technology plan is devised to continue the systematic process of bringing up-to-date technology infrastructure and utilization to the district. The Cuero ISD Technology Plan has been developed and is designed around the six key areas of the Texas Long Range Plan for Technology, 2018-2023: Personalized, Flexible, Empowered Learning Environment; Equitable Access; Digital Citizenship; Safety and Security; Collaborative Leadership and Reliable Infrastructure.

Also, specific attention is given to addressing student standards for technology as defined by the Technology Applications Texas Essential Knowledge and Skills (TEKS), required in the Texas Education Code, Section 28.002 and the 21st Century Learning Skills.

The plan is intended as a framework that will be continually evaluated and revised. All students and employees of the district will benefit from this plan.

NEEDS ASSESSMENT

Assessment Processes used at Cuero ISD:

CPOC and DPOC recommendations
CIP and DIP objectives
Analysis of infrastructure
Work order actions, experience and daily operations
Cabinet meeting recommendations
Hardware and software inventories
Equipment/Student ratios
Equipment/Teacher ratios
Technology and District surveys

Existing Conditions:

The Cuero Technology Department is managed by Paula Brown, Technology Director. Dave Truman serves as Network Coordinator and Oscar Ray serves as the District Instructional Technologist.

The CISD Technology Department includes the following areas of expertise:

Network Services, Instructional Technology, Technical Information Services, Win/Mac/iOS/Chrome OS Support, Emerging Technologies, Purchasing, and Technology Warehouse.

The district continues to experience an increased usage of technology by both teachers and students. The goal of the Technology Department in CISD is to ensure that the hardware, software, infrastructure and contracted web services are used to transform teaching and learning by supporting the following:

- iPad class sets which provide engaging ways for learners to access, share and create knowledge are supported and managed by the Technology Department. By design, each campus has classroom sets in most classrooms. Some classrooms share iPad sets. Teachers are able to utilize Apple Classroom to manage the use of the iPads. GSuite (Google Apps for Education) is available for staff and student use. Google Classroom is utilized as a learning management system.
- Support and user setup for the District's software and contracted web services are maintained by the Technology Department. The department collaborates with staff to research, model, implement and refine the use of these tools.
 - GSUITE (Google Apps for Education) - a collaborative set of tools that allow students to access, share, and create content while building documents, presentations and spreadsheets anytime, anywhere.
 - Web 2.0 Tools and Emerging Technologies - tools that support students in becoming active participants in utilizing and designing their own learning content.
 - iPad Apps - used for researching and implementing a more mobile, personalized, self-paced, and differentiated focus on both "content" and "creativity" in learning as well as productivity.
 - Content Driven Technology Solutions – Safari Montage and Discovery Education

- Web Contracted Services for Learning: iStation Reading/Math, Reading Acellus, A+ Learning, Rosetta Stone, Mentoring Minds, Xello, Stemsscopes, StarFall, Renaissance Learning, Edgenuity, Reflex Math, etc.
 - Web Contracted Services for Administration: Txeis, ClassLink, Anonymous Alerts, BlackBoard/ParentLink, Aesop, Educator’s Handbook (discipline), DMAC, EasySped, Success Ed, EduHero, Schooldude, TEKS Resource System, etc.
 - Digital Textbooks: Houghton Mifflin, McGraw Hill, Pearson
 - Digital Citizenship Curriculum
- Hardware
 - The following platforms are supported: Windows, Mac, iOS, Chrome OS
 - Each teacher has a laptop or desktop for teacher use only
 - Each teacher has an iPad
 - Office and administrative staff have laptops or desktops
 - Network printers and copiers are available at all campuses
 - The high school campus has two open labs, and four teaching labs.
 - The junior high campus has one open lab and one teaching lab.
 - The elementary campus has one open computer lab and one mobile science lab.
 - The primary campus has one open computer lab.
 - Each campus library has multiple desktop computers (at least 6+)
 - Each campus library has an iPad cart for checkout and use in the Library.
- Network
 - The CISD Network Services is responsible for the installation, maintenance, and support of the technical systems that provide the information technology infrastructure of the district. The network and infrastructure areas concentrate on the wired and wireless communication networks, servers, data storage, back-up and recovery, e-mail system, cabling, and phone system. The technical service area focuses on the installation and support of the computers, laptops, software, iPads, and other technology related items that are provided to the staff and students in the district. Network and Technical Services is managed by the Network Coordinator. The Network Coordinator serves as the ERate manager.
 - A wide area network utilizing Dell S6010 Switches with a 40 gigabit backbone connects all of the campuses together.
 - Campuses have a switched network (Dell N3048EP switches in 42 closets) with a 10 gigabit backbone with a WiFi Access Point in each classroom. Different types of campus traffic is segregated with VLAN’s.
 - The District has 335 Meraki wireless access points including at least 1 in each classroom.
 - A contracted (Spectrum) fiber circuit provides internet access for the district at 2 Gbps.
 - Internet filtering, including SSL decryption, and proxy services are all provided by a network appliance (Content Keeper).
 - Staff and student email is web hosted at GSUITE.
 - A Netgate firewall running PfSense provides protection and security by limiting outside access to the District’s data and users.
 - All libraries use a district Windows 2012 server with Follett Destiny software.

- Student and financial accounting (TxEIS) is hosted at Region 3.
- Acellus video caching appliance + 3 Acellus STEM labs at Hunt.
- ES Server for HVAC control.
- Seven Security Camera servers including SB507 Special Ed Classrooms – 310 total cameras.
- VMware
- Safari Montage Content server
- JAMF Mobile Device Manager
- Toshiba CTX PBX with approximately 200 Digital and VoIP phones
- All campuses have networked copiers and printers available.
- Every classroom is internet capable and has a projector or 65” flat panel display and document camera installed that works in conjunction with the teacher’s laptop or desktop.
- Cuero ISD is currently licensed for the Microsoft Operating System and Office Suite.
- Cuero ISD is currently using Bitdefender Antivirus software.

As a final overview of our existing conditions, Cuero ISD teachers are equipped with digital devices that allow them to manage their class 24/7 from any internet accessible computer. Their productivity tools include, but aren’t limited to, an online grade book, online attendance, e-mail communication access, streaming video, online textbooks with supplemental material, access to collaborative tools such as GSUITE and content-rich applications.

Cuero ISD’s curriculum is integrated with appropriate technology tools to facilitate best practices for teaching and learning in the classroom, to meet group and individual student needs, and to maximize the educational environment for all learners. The integration of curriculum and technology provides the framework for the following strategies/objectives:

- Acquisition of basic skills, content knowledge, application and higher level thinking skills
- Lifelong learning
- Accommodation of a variety of learning styles and multiple intelligences
- Active participation in real-life experiences and relevant activities
- Best practices that motivate, challenge, and engage learners every day
- Authentic and varied assessments
- Opportunities for whole group, small group and individualized instruction
- Accessibility to learning via online environments
- Digital Citizenship

Emerging Technologies

Emerging Technologies are new technologies that are currently developing or will be developed over the next five to ten years which will substantially alter the learning and social environments of our students.

Emerging technologies’ success in the educational setting requires continuously researching trends, networking with vendors and other school districts as well as collaborating with students and teachers to better understand the current trends to keep an eye on the future.

When a new tool or software emerges it is studied for the impact it will have on instruction by working closely with Curriculum and Instruction, and the staff. The technology department will analyze how the tools or software will work with our current infrastructure and network; technical purchasing will look at purchasing options and distribution.

Technology Purchasing

This office is responsible for ordering technology equipment for the Technology Department and all district locations.

The Technology Purchasing Department is able to:

- Provide technical specifications for products and services to meet the needs of the district
- Assist campus personnel in procedural requests and approvals for purchasing technology
- Facilitate vendor support and training as needed for Technology Department
- Negotiate with vendors for demo equipment as needed
- Assist with budgets and new projects
- Assist with RMA's and purchasing discrepancies
- Assist with product evaluations and pricing for curriculum
- Coordinate the maintenance of annual support/maintenance contracts
- Maintain approved Vendor relations to provide continued service, competitive pricing and evaluation of district needs
- Evaluate new vendors and coordinate setup for district purchasing
- Track and document service and product issues with vendors
- Document end of life products and recommend replacement products
- Provide technical specifications for formal RFP/bids
- Research and utilize purchasing co-ops as needed
- Assist Accounts Payable with outstanding invoices
- Coordinate Bid and vendor meetings, training and demonstrations
- Monitor purchasing workflow to provide technical recommendations for better efficiency
- Receipt of all Technology items ordered in the district
- Verification of orders received; RMA items received incorrectly
- Release the purchase orders for payment
- Asset labeling of all items
- Notification to campus/departments when orders are ready for pick up
- Technology Inventory items stored and tracked
- Inventory items checked out to technicians as needed for repair
- Assigning and tracking inventory checked out to technicians
- Inventory Reconciliation with technicians on a weekly basis
- Tracking inventory monthly with printed reports showing items received, items installed and items on hand.
- Work with vendors/manufacturers when parts are defective to get warranty issues resolved
- Assisting Technical Services with pick up of end of life/defective technology items from campus/departments

- Organize end of life/defective technology items and deliver to appropriate department for the products to be processed for exiting the district
- Process and store working spare technology items to be utilized if needed
- Assisting Technical Services department with delivery of technology items
- Repairing out of warranty laptops

Assessment Findings

The following components reflect targets for improvement and are essential goals for the next 5 years:

- Develop updated instructional materials for Social Networking and Digital Citizenship.
- Research BYOD (bring your own device).
- Provide sustained, on-going staff development for teachers and staff with an emphasis on Digital Citizenship and the use of emerging technologies for student engagement
- Continue to use technology as a means to provide information to parents and the community and incorporate new tools as they emerge
- Support the expansion of CTE courses in the district.
- Provide technology staff development that models best practices of professional learning communities and blended instruction based upon current research
- Provide a robust, reliable infrastructure to support the instructional needs of teachers and students that extend beyond the traditional school day
 - Replace all existing 7000 series Dell switches with N3048 switches.
 - Replace all access points with devices supporting a higher backhaul speed.
 - Research the necessity of the VM environment.
 - Replace the VM servers with current model servers (If research shows that we wish to maintain a VM environment).
 - Remove the cameras from the main network and create a separate network for them to reduce traffic improving throughput.
 - Establish a replacement plan for all end user devices
 - Research and explore cybersecurity measures
- Provide staff with efficient and timely technology support
- Provide teachers and administrators with reliable, current student data
- Provide print and electronic resources that are sufficient to meet students' needs in all subject areas and that are continuously monitored for currency and relevancy

Replacement Plan

The Cuero ISD will strive to maintain a cycle of upgrading, migrating, salvaging, surplus, and/or replacing technologies according to the following plans. These technologies will be "aged" and tracked using inventory statistics in Follett Resource Manager. Replacement will be based on age and model specifications.

DESKTOP/LAPTOP COMPUTERS

Every 5 years for computer labs, libraries, and classroom equipment

Every 4 years for administrative/office computers.

MOBILE DEVICES

The Cuero ISD currently has 1725 iPad model 4. These iPads are unable to update to the current iOS and do not support the state testing browsers. A replacement iPad will run approx. \$294. The remaining devices are iPad Airs, Air 2s, iPad 5th gen. and iPad 6th gen.

Replace 500 devices each year.

Develop a plan for replacement of the following devices:

Network Printers

Touch Displays

Projectors

Document Cameras

Apple TVs

The goals of the technology replacement plan are to:

- Assure that adequate computing resources are available in facilities, classrooms, and offices to support learning;
- Assure that each faculty and staff member who uses computing resources in his or her position has device(s) of sufficient capability to fulfill his/her responsibilities and necessary training;
- Implement minimum standards for computing equipment repair and replacement on campus and promote uniformity of technology levels within each area;
- Provide for the cost effective and timely purchasing and installation of new equipment while decreasing the deployment time for new equipment; and
- Expedite the disposal of old equipment.

GOALS, OBJECTIVES AND STRATEGIES

Goal 1: Personalized, Flexible, Empowered Learning Environment: We will promote a culture that fosters creativity, communication, collaboration and critical thinking through the responsible use of technology.

Objective 1.1: Provide resources and intentional training that promotes a culture which embraces creativity, communication, collaboration and critical thinking.

Objective 1.2: Increase the successful use of technology in the classroom where all learners are authentically engaged in technologically enhanced experiences.

1.1.1 Educate staff on Technology Application TEKS through a variety of professional development opportunities.	Technology Director, District Instructional Technologist, Campus Administrators, Asst Supt of Curriculum & Instruction	Creation of online resources and scheduling of summer workshops, after school training sessions, lunch and learns, etc.	2020-2023
1.2.1 Develop a uniform age-appropriate expectation of what technological engagement looks like in the classroom.	Technology Director, District Instructional Technologist	Utilization of highly engaging Technology Applications skills in the curriculum	2021

Goal 2: Equitable Access:

Objective 2.1: Keep staff informed on the availability of services and equipment in the district and campus.

Objective 2.2: Facilitate access to all district resources both at and away from school

2.1.1 Develop a marketing plan to bring awareness to services the technology dept can provide.	Technology Director, District Instructional Technologist, Campus Administrators, Asst Supt of Curriculum & Instruction	Marketing plan developed and shared.	2020-2021
2.2.1 Provide cloud-based resources to facilitate instruction.	Technology Director, District Instructional Technologist, Campus Administrators, Asst Supt of Curriculum & Instruction	Resources in place.	2019
2.2.2 Provide solutions for student access to resources at home	Technology Director, District Instructional Technologist, Network Coordinator	ATT Hotspots, Kajeet smart plan. Filtered internet devices available for checkout from the campus library.	2020-2021
2.2.3 Sustain use of GSUITE to facilitate 24/7 access to creation and classroom resources.	Technology Director, District Instructional Technologist, Network Coordinator	Provide training to staff and students on the use of Google Drive and Classroom	2020
2.2.4 Provide a sufficient district wireless network for utilization of district devices and non-district devices when needed.	Technology Director, Network Coordinator	An access point is installed in each classroom and multiple access points installed in common areas with a guest SSID for non-district devices and filtered internet.	2019

Goal 3: Digital Citizenship:

Objective 3.1: Ensure that students have access to safe digital content.

Objective 3.2: Ensure that students and staff have access to resources to promote digital citizenship.

3.1.1 Research current CIPA compliant web filters that allow for SSL decryption that will continuously grow and adapt to challenging needs.	Technology Director, Network Coordinator	Research is completed and filter selected.	2019
3.2.1 Develop a uniform presentation to educate staff on the expectations of the staff RUTA and review for changes annually.	Technology Director, Network Coordinator, District Instructional Technologist	Creation of presentation.	2020
3.2.2 Include the "Responsible Use Technology Agreement" in the school registration packets.	Campus Office Staff	List of students who have not turned in the RUTA. Plan to contact student family.	2019
3.2.3 Provide a digital citizenship curriculum at each campus that is grade-appropriate.	Technology Director, District Instructional Technologist, Campus Administrators	Presentation and lesson plans in place.	2019

Goal 4: Safety and Security: We will provide a safe and secure digital learning environment that will protect the district and ensure safe practices for digital safety.

Objective 4.1: Provide a current CIPA compliant web filtering system that allows for monitoring and alerts.

Objective 4.2: Provide a current email filter that allows for continuous monitoring and spam filtering.

Objective 4.3: Assess the district using the Texas Cybersecurity Framework and prioritize resources to address the greatest risks.

Objective 4.4: Put protocols/policies in place to ensure the safety of student data and decrease security vulnerabilities.

Objective 4.5: Create a process that will address access for user accounts that leave or change roles within the district.

Objective 4.6: Conduct a vulnerability assessment of the district.

Objective 4.7: Provide training on cybersecurity and safety for all staff.

Objective 4.8: Increase communications capabilities from the classroom.

Objective 4.9: Increase safety on campus through the use of security cameras and vape detectors.

Objective 4.10:

4.1.1 Research current CIPA compliant web filters that allow for SSL decryption that will continuously grow and adapt to challenging needs.	Technology Director, Network Coordinator	Research is completed and filter selected.	2019
4.2.1 Research current email filters	Technology Director, Network Coordinator	Research is completed and filter is in place.	2019
4.3.1 Evaluate the district according to the Texas Cybersecurity Framework.	Technology Director, Network Coordinator	Report established that will drive decisions regarding the priority of cybersecurity needs.	2020
4.4.1 Create cybersecurity policies.	Technology Director, Network Coordinator, District Instructional Technologist	Policies created and submitted to the Supt and Board for approval.	2020-2021

4.4.2 Research trends in data and network security.	Technology Director, Network Coordinator, District Instructional Technologist	Ongoing research is conducted that drives decisions.	2020
4.4.3 Review password policies and best practices for all systems and enforce secure password procedures.	Technology Director, Network Coordinator, District Instructional Technologist	Password policies and best practices are in place and enforced.	2020
4.5.1 Research a process for efficient control of user accounts.	Technology Director, HR, Network Coordinator, District Instructional Technologist	Process created and put in place.	2020
4.6.1 Research vulnerability assessment options for the district.	Technology Director, Network Coordinator	Contract with Region 3 to perform a vulnerability assessment.	2020
4.7.1 Research training options for cybersecurity training.	Technology Director, Network Coordinator, District Instructional Technologist	Assign one hour of Cybersecurity training for staff through Eduhero. Assign ongoing monthly training through Infosec with the assistance of Region 3 staff.	2019-2020
4.8.1 Research and explore options for immediate access to emergency services in the classroom.	Technology Director, Network Coordinator, Campus Administrators	System in place (phones or software).	2019-2020
4.9.1 Continue to replace and add security cameras as needed based on recommendations from campus administrators.	Technology Director, Network Coordinator	Replacement and addition of security cameras.	2019-2023
4.9.2 Move security cameras to their own network.	Technology Director, Network Coordinator	Security camera network setup and cameras moved.	2020
4.9.3 Explore options for vape detection at the secondary campuses.	Technology Director, Network Coordinator, Campus Administrators	Purchase and installation of vape detectors.	2020
4.10.1 Evaluate back-up solutions for server and staff data.	Technology Director, Network Coordinator	Back-up solution in place.	2019-2020

Goal 5: Collaborative Leadership:

Objective 5.1: Evaluate best practices for integrating technology into the classroom, addressing technology needs and concerns, and provide guidance on technology.

5.1.1 Continue to work with campus improvement committees to set campus technology priorities and actions towards common goals.	Technology Director, Campus Administrators	Committees in place. (CPOC)	2019
5.1.2 Continue to work with the district improvement committee to set district technology goals.	Technology Director, Asst Supt of Curriculum & Instruction, Campus Administrators	Committee in place. (DPOC)	2019
5.1.3 Research opportunities for collaboration on best practices outside of the district.	Technology Director, Network Coordinator, District Instructional Technologist	Workshops at Region 3. Consulting with GTS.	2019
5.1.4 Work effectively as a district towards goals set in the DIP and CIP.	Campus and district administrators	Monthly cabinet meetings in place.	2019
5.1.5 Obtain CompTIA+ training and certification for district computer technicians.	Technology Director, Network Coordinator, Technicians	Training and certification in place.	2020

Goal 6: Reliable Infrastructure: We will continue to provide advancing infrastructure solutions that will scale with our district’s demands for a robust learning environment.

Objective 6.1: Evaluate data usage trends via a monthly report with correlation of district activities including teaching and instructional activities.

Objective 6.2: Further evaluate and update hardware replacement cycles and device end of life on district hardware.

Objective 6.3: Collect teacher surveys annually regarding usage and experience in the classroom.

Objective 6.4: Continuously evaluate and update the district’s technology infrastructure as needed.

6.1.1 Establish and implement a monthly reporting schedule to collect data.	Technology Director, Network Coordinator, District Instructional Technologist	Report established that would drive decisions on upgrading and maintaining district hardware and software.	2020
6.2.1 Develop a timeline and replacement process for all technology devices.	Technology Director, Network Coordinator, District Instructional Technologist	Updated and reliable technology for staff and students.	2020-21
6.2.2 Develop a standard device list for core technology items by user type.	Technology Director, Network Coordinator	List in place with updates annually.	2020
6.3.1 Create and distribute an annual end of year survey to collect more in-depth data regarding technology usage and experience.	Technology Director, Asst Supt of Curriculum & Instruction	The end of year survey will provide a pathway for readiness for the upcoming school year.	2020
6.4.1 Research various resources to ensure the district stays ahead of the upcoming needs.	Technology Director, Network Coordinator	Establish a plan of action through collaboration with the Education Superhighway, Region 3, and TCEA.	2020
6.4.2 Utilize funds from E-Rate for an infrastructure design that will meet future needs.	Technology Director, Network Coordinator	Post 470s with E-Rate.	2019-2023
6.4.3 Fully document the network, inc. security	Technology Director, Network Coordinator	Document in place and updated as needed.	2020

cameras, access points, etc.			
6.4.4 Update access points at all campuses to increase backhaul speed.	Technology Director, Network Coordinator	Planned replacement of Access Points.	2019-2021
6.4.5 Continue to provide reliable, secure and high-speed Internet.	Technology Director, Network Coordinator	Spectrum Internet in place.	2019
6.4.6 Refresh selected UPS units that have reached EOL to provide short-term service during power outages and to provide clean power.	Technology Director, Network Coordinator	Replacement of UPS units.	2020-2021

Evaluation Process

Cuero ISD actively monitors all technology implementations as part of our ongoing evaluation plan and will review and revise the various strategies throughout each year of the designated timeline by district administration to ensure that the strategies, which are set out here are current and relevant as the work of the District Improvement Plan moves forward.

APPENDIX

Cuero ISD Website: <https://www.cueroisd.org>

Cuero ISD Technology Plan: <https://www.cueroisd.org/Content2/68>

Cuero ISD Responsible Use Technology Agreements: <https://www.cueroisd.org/Content2/1044>

Cuero ISD CIPA Policy: <https://www.cueroisd.org/Content2/1046>

Cuero ISD Technology Dept: <https://www.cueroisd.org/7/Content2/512>