



Technology Plan 2024-2028

MISSION AND VISION

Values, Vision and Mission

The Aromas San Juan Unified School district defines how we must work with our students, colleagues, families, and community through the following core values:

- Caring
- Community
- Equity
- Inclusion
- Collaboration
- Professionalism
- Shared Leadership
- High Expectations

Vision

A thriving learning community committed to equity and excellence

Mission

Aromas San Juan Unified School District, in partnership with our families and culturally rich community, empowers students to be self-directed learners, effective communicators, and global critical thinkers. We educate in an inclusive, caring, collaborative, creative, learning community engaged in real-world problem solving, learning to learn, and habits of mind.

Digital Citizenship:

The evolving landscape of technology and its impact on education is unpredictable. Despite the uncertainty, we have diligently researched emerging trends to inform our strategy for the next four years.

The ascent of Artificial Intelligence (AI) in education brings both opportunities and challenges. Educator's ability to customize learning experiences, adapt content, and save time through automation are just a few key benefits. However, the rise of AI tools like ChatGPT challenges the learning environment, underscoring the need for more teacher education about AI and the importance of teaching students how to ethically use AI tools in their learning. ASJUSD will work to enhance awareness, so educators and students can harness AI to enrich the classroom experience intentionally and positively.

Introduction:

At ASJUSD, our mission is clear: in partnership with our families and culturally rich community, we empower students to be self-directed learners, effective communicators, and global critical thinkers. We educate in an inclusive, caring, collaborative, creative, learning community engaged in real-world problem-solving, learning to learn, and habits of mind. Central to this mission is our dedication to leveraging technology to enhance learning outcomes and streamline administrative processes. In line with this vision, our four-year technology plan outlines strategic initiatives, including upgrading our internet connection, migrating on-premises servers to cloud-based solutions, and implementing robust security measures and a more robust firewall solution. We will equip staff and students with the essential tools and training needed. We will continue to support equitable access to resources and look to integrate state-of-the-art technology in classrooms, such as interactive smart boards and VR headsets. Crucially, our plan involves stakeholder involvement from teachers, administrative staff, students, and parents, and includes provisions for data backup and disaster recovery to safeguard data integrity and minimize disruptions. Through these comprehensive measures, we remain steadfast in our commitment to providing a technologically advanced and resilient educational environment for all stakeholders.

Stakeholders:

ASJUSD will form a technology committee comprised of at least one board member, one student from each site, IT staff, and one district member. Working collaboratively the committee will review survey results, proposals, and components of the District's four-year Technology Plan. Through ongoing meetings, committee members will provide valuable feedback to help shape the development of this plan and guide its implementation.

The Aromas-San Juan Unified School District will benefit from the committee's dedication by having a robust technology vision. This plan will serve as the foundational

framework for instructional technology applications in future years. The continuous annual review and revision process will ensure a thorough and well-defined implementation of information-age tools and skills, supporting the academic achievement of ASJUSD students and preparing them to be college and career-ready.

Goals:

1. Network Upgrades: Transition from a 1GB internet connection to a 5GB connection to support increased bandwidth demands for digital learning, administrative tasks, and communication.
2. Cloud Migration: Migrate on-premises servers to cloud-based solutions to enhance scalability, reliability, and accessibility while reducing maintenance costs and hardware dependencies.
3. Security Upgrades: Implement access controls both physical and virtual at all school sites to safeguard sensitive data, prevent unauthorized access, and mitigate cybersecurity risks. Because of the sensitive nature of information security, specific tools and methods used will not be published.
4. Firewall Upgrade: Transition from our current firewall solution to a more robust and customizable solution to improve network security, traffic management, and threat detection capabilities.
5. Equip staff and students with essential tech tools and training.
6. Support equitable access to resources and curriculum for all students.
7. Integrate State-of-the-Art Technology: Equip classrooms with the latest technological tools and resources, such as interactive smart boards, virtual reality (VR) headsets, and advanced educational software, to enhance teaching effectiveness and student engagement.
8. Technical support: In addition to ensuring high-performing, reliable instructional and operational technologies, hardware, software, and systems, the district will allocate ample technical support resources for these purposes.

Timeline:

2024-25 Summary:

ASJUSD focuses on key initiatives: upgrading the internet connection to 5GB, continuously enhancing network infrastructure, and increasing wireless capacity. We aim to migrate essential servers and applications to the cloud. Staff and students will receive essential tech tools and training, including the start of a 4-5 year refresh cycle for devices, onboarding, and training for new staff. Classroom technology will be standardized, 1:1 Chromebooks for all students, interactive displays, and document cameras in all classrooms. Starting January 2024, the Raptor visitor management system will enhance campus security and update our Student Information System with entry and exit information.

Internet Upgrade:

Assess current internet infrastructure and bandwidth requirements. Collaborate with service providers to determine the steps necessary to upgrade to a 5GB internet connection. Conduct thorough testing and ensure seamless integration with existing systems.

- The district will establish a plan for continuous upgrades of network infrastructure/backbone to support high-speed, high-capacity wired and wireless access.
- The district will continue to add wireless capacity within all learning spaces (including outdoors) as demand increases to ensure that all students and staff have access to wireless services throughout each campus.

Cloud Migration Strategy:

Identify key on-premises servers and applications suitable for migration to the cloud. Evaluate various cloud service providers based on factors such as reliability, security, and cost-effectiveness. Develop a migration plan and initiate the migration process for selected systems.

Equip staff & students with essential tech tools and training:

All staff & students will have access to technology tools, skills & training necessary to succeed.

- ASJUSD will provide funding to support a 4-5 year refresh cycle for staff & student 1:1 technology devices.
- ASJUSD will ensure that all staff have access to, and knowledge of how to use, a universal single sign-on service, to enable access to necessary instructional technology tools anywhere at any time.

- The district will implement an “on-boarding” process in collaboration with IT, HR, & Curriculum for new staff to include training in relevant systems.
- The district will provide access to online tutorials, support documentation, and hands-on staff training.
- The district will establish equipment standards for district-funded technology devices and communicate with schools and departments

Priority	Technology Item
1	Teachers have a laptop that meets the district standard for access to student records, district systems, and management of digital instruction.
1	Every student has access to a Chromebook 1:1.
2	Each classroom has a wall-mounted or cart-mounted 65-75” flat panel multi-touch display with wireless mirroring available.
2	Each classroom has a document camera.
3	Each K-8 classroom has a Chromebook cart. At the high school students take their Chromebooks home.

Disposal/Reuse of Technology Assets:

ASJUSD will find an environmentally friendly partner for regular pick-up of technology that has no resale value. For larger quantities of devices, ASJUSD can engage vendors in an RFP process and award that contract to the vendor who can provide us with a combination of a high resale value, secure erasure of hard drives, and customer service.

Visitor Management:

Starting in January 2024, ASJUSD implemented Raptor, a kiosk-based check-in system designed to enhance campus security and streamline visitor management. This sophisticated system verifies visitors against criminal databases, ensuring safety, and automatically prints visitor badges and student late slips. Additionally, it can alert staff when visitors arrive to see them and seamlessly updates our Student Information System with late arrival and early departure information, providing a comprehensive and efficient solution for managing campus entries and exits.

2025-26 Summary:

ASJUSD continues modernizing classrooms with state-of-the-art technology, such as SmartBoards, virtual reality (VR) headsets, and advanced educational software. Explore game-based learning and the potential development of an eSports center. The surveillance system, integrated paging, bell, and clock system will be reviewed and assessed. Lastly, we will start the evaluation of alternative firewall solutions.

Integrate State-of-the-Art Technology:

ASJUSD has started modernizing classrooms around the district offering an opportunity to pilot new state-of-the-art technology in those spaces.

- Teachers can untether from their desks. Teachers and students can mirror their devices to a SmartBoard. This will allow teachers to teach from anywhere in the classroom, offering tailored instruction to students at their desks.
- Look into incorporating virtual reality (VR) headsets and advanced educational software. This integration supports personalized learning, fosters collaboration, and prepares students for a technology-driven future while providing teachers with innovative methods to deliver and manage curriculum. With the advent of augmented reality, educators can create virtual science labs, offering experiences beyond the realm of possibility in the physical world. Teachers can utilize resources to make scientific principles more accessible and concrete.
- We will look into adding game-based learning, characterized by its interactive and self-guided nature has shown great success in engaging students. Moreover, ASJUSD will assess the benefits of developing an eSports center, enabling students to integrate gaming skills into their academic pursuits.

Paging, Bell, and Clock System:

Each school in the District benefits from an integrated system that seamlessly combines paging, bell scheduling, and a synchronized central clock. This system supports interior, exterior, and classroom paging, ensuring comprehensive communication throughout the campus. Office phones provide easy access to the paging system, enhancing operational efficiency. The technology and functionality of paging systems have advanced significantly in recent years, looking ahead to the 2025-26 school year, we plan to explore and evaluate potential replacement solutions to improve our communication infrastructure further.

Surveillance Cameras:

ASJUSD has 47 surveillance cameras in operation, located at the entrances to each school campus and district office, along with cameras throughout campus. These cameras are accessible via a web-based interface and store up to 60 days of footage that can be easily reviewed and retrieved. Like all technology camera systems have

advanced significantly in the past years, ASJUSD will evaluate our current system to ensure it meets all needs now and in the future.

Firewall Upgrade:

Evaluate alternative firewall options to replace the current solution. Consider factors such as advanced threat detection capabilities, ease of management, scalability, and cost.

2026-27 Summary:

ASJUSD will implement the cloud migration plan. Access controls, including RBAC, and MFA will be deployed across school sites with staff training provided. To ensure equitable access to resources the Technology Department and Ed Services will coordinate and regularly evaluate programs and funding. Schools will help maintain up-to-date technology devices and accurate records of student devices and software licenses.

Cloud Migration Implementation:

Execute the migration plan developed in the previous year. Coordinate with stakeholders to minimize disruptions during the migration process. Conduct thorough testing and validation to ensure data integrity, application functionality, and performance post-migration.

Access Controls Implementation:

Deploy access control mechanisms such as role-based access control (RBAC), multi-factor authentication (MFA), and network segmentation at all three school sites. Provide training and resources to staff members to promote awareness and adherence to security protocols.

Ensure Equitable Access to Resources and Curriculum:

To support equitable access to resources and curriculum for all students, ASJUSD will use information gathered from current and previous years to inform our approach. The Technology Department and Ed Services will collaborate regularly to align educational goals with technology resources. We will continuously evaluate programs and funding to ensure equitable allocation of technology tools.

- The district will evaluate programs and funding on an ongoing basis, to ensure that we are allocating resources in a way that enables all students to have equitable access to appropriate technology tools.

- Schools will have current technology devices available in the classrooms in a ratio that supports learning goals using online materials. Schools will have in-class devices available for students to use when appropriate.
- The technology department and the site staff will maintain an accurate accounting of student devices.
- The technology department will work with ed services and sites to maintain an accurate accounting of software and online instructional materials licenses.
- The district technology department will ensure fast, reliable network performance.

2027-28 Summary:

Based on previous assessments, demos, and research deploy a new firewall solution district-wide. Provide regular security awareness training for staff and, when applicable, students to promote best practices in cybersecurity and data protection. The IT Department will continuously upgrade information security tools and procedures to address evolving cyber threats.

Firewall Upgrade:

Using the information gathered in previous years select and deploy the chosen firewall solution across the district's network infrastructure. Conduct thorough testing and configuration to optimize security and performance.

Security Awareness Training:

Conduct regular security awareness training sessions for staff and students to educate them about cybersecurity best practices, threat mitigation strategies, and the importance of data protection. Foster a culture of security awareness and accountability throughout the district.

- Online training for staff and High School students when appropriate.

Information Security Updates:

The Information Technology Department continues to strengthen the District's information security-based tools and procedures to counter the ever-growing threat of Cybercrime.

Ongoing/Annual:

Inventory:

The Tech Department maintains a fixed asset inventory, tracking all computer hardware and related equipment. A key operational goal is to upgrade and standardize this inventory management process, aligning it with the adoption of standardized imaging and deployment systems for all computer hardware. We aim to expand the catalog of items in the system, providing actionable life cycle data. With precise information about each piece of equipment and its installation date, we can effectively plan for replacements as they reach the end of their life cycle. Starting in the summer of 2024, we will conduct a thorough classroom-by-classroom inventory to ensure our records accurately reflect our current state.

Disposal/Reuse of Technology Assets:

ASJUSD will find an environmentally friendly partner for regular pick-up of technology that has no resale value. For assets that can be resold, we can use an online auction site. For larger quantities of devices, we will engage vendors in an RFP process and award that contract to that vendor who can provide us with a combination of a high resale value, secure erasure of hard drives, and customer service.

Technology Support:

The district will provide sufficient technical support resources to ensure high-performing, reliable instructional and operational technologies, hardware, software, and systems.

- Ensure that sites have sufficient technical support to match their needs.
- Maintain district technology support staff.
- The district will maintain a high-performing network with redundancy to ensure close to 100% uptime and sufficient bandwidth for all users.
- Ensure safe and secure networks.
- Content filtering
- Virus protection
- Intrusion protection
- Security audits
- Ensure student and staff data privacy and security.

Copiers and Printers:

The district equips each school with Commercial Office Printers owned by the district, ensuring reliable and efficient printing capabilities. ASJUSD currently partners with MBS Works for professional servicing, covering parts, labor, toner, developer, staples, and connected network services. Notably, this agreement does not include paper. The

comprehensive servicing plan costs approximately \$3,400 per site annually, providing schools with well-maintained printing resources to support their operational needs.

Telephone VoIP System and Hardware:

Currently, ASJUSD contracts with Telco for our VoIP phone system. Telco Hosted vPBX phone system includes features such as programming IVR, ring groups, and call routing. Their comprehensive service also provides phone provisioning, deployment support, training, and documentation. Installed in 2022, the system operates under a three-year agreement with Telco. Additionally, ASJUSD staff benefit from the “voicemail to email” service, which records, transcribes, and sends voicemail messages directly to the recipient’s email inbox, enhancing communication efficiency. Their comprehensive service costs approximately \$400 per site monthly. ASJUSD plans to explore and evaluate potential replacement solutions to improve our communication infrastructure further at the end of our current agreement.

Student Data Privacy:

ASJUSD prioritizes student data privacy, meticulously reviewing vendor user agreements for every software and online subscription to ensure proper data collection and sharing practices. While this process is straightforward for major subscriptions, it becomes more complex when dealing with free apps or tech products that teachers may use to enhance instruction and boost student engagement. By diligently vetting these tools, the district strives to maintain the highest standards of data security and privacy for our students.

Cyber Security/Systems Integrity and Disaster Recovery:

Each year the Technology Department evaluates the following factors concerning cyber security:

- User training. Are staff receiving regular training on how to appropriately respond to attempts to compromise their credentials or our network?
- Authentication and identity management. Are only authenticated users gaining access to our network and platforms? How are we confirming that users are who they say they are when they log in?
- Endpoint security. Are we able to detect and respond to threats to our district-issued devices, such as malware attacks?
- Network safeguards. Are we aware of vulnerabilities to our network that could be exploited by bad actors, and can we take action to eliminate those vulnerabilities?
- Disaster recovery. In the event of a catastrophic emergency or a ransomware attack, are we able to recover our data quickly and get back up and running?

Budget:

Internet Upgrade:

Allocate funds for procuring and installing new networking equipment required for the 5GB internet upgrade, & budget for ongoing internet service fees and maintenance costs.

Staff & Student Hardware:

The district will provide funding to support a 5 to 6-year refresh cycle for staff, and student technology devices as needed. Other devices are purchased as funding and resources become available at each site.

Overall Estimates:

	2024-25	2025-26	2026-27	2027-28
Ongoing/Annual	\$135,545	\$111,545	\$111,545	\$115,545
One-Time	\$6,716 for Aruba licensing (3-years) \$25,000 to support 24-25 new project implementation	\$25,000 to support 25-26 new project implementation	\$25,000 to support 26-27 new project implementation	\$25,000 to support 27-28 new project implementation \$40,000 for firewall upgrade
TOTAL	\$167,261	\$136,545	\$136,545	\$180,545

Ongoing / Annual:

Hardware:	24-25	25-26	26-27	27-28	Approx cost:
Staff Computers	20% annually per site ~\$12k	20% annually per site ~\$12k	20% annually per site ~\$12k	20% annually per site ~\$12k	\$6,000 to \$8,000 per site
Chromebooks	300 or 18% replacement in summer 2024 ~\$104k	200 or 12% replacement in summer 2026 ~\$80k	200 or 24% replacement in summer 2027 ~\$80k	200 or 24% replacement in summer 2028	Refresh Chromebooks as they become obsolete/damaged or Google drops support. \$290 to \$350 per unit
Peripherals Refresh classroom peripherals as they become damaged or obsolete.	The goal is for less than 5% of replacements due to damage a year.	The goal is for less than 5% of replacements due to damage a year.	The goal is for less than 5% of replacements due to damage a year.	The goal is for less than 5% of replacements due to damage a year.	Varies based on equipment. -Newline board: \$3,200 (~74 units total at all sites) -Docking stations: \$190 (~65 units total at all sites) -Doc cameras: \$150 (~65 units total at all sites) -Chrome cart:\$1,600 (~60 units total at all sites)

One-Time (Projecting \$25,000 per year to support new initiatives/projects):

Network Infrastructure:	Cycle:	Approx cost:
Switches	Replace or upgrade as needed	\$1,000 - \$6,000 per switch depending on model #
Access Points	Replace or upgrade as needed	\$300 - \$1,000 per AP depending on model #
Wireless Controller	Replace or upgrade as needed	\$15,000-\$25,000 per controller depending on model #
Aruba Central	Yearly license	~\$1,800 per site per year. ~\$5,400 per year

Security Awareness Training:

Allocate funds to provide staff with adequate security awareness training

Cloud Migration:

In the future, the district may consider allocating funds for cloud service subscriptions, data migration tools, and any consulting services required for the migration process. Estimates are not known for this area until a specific service is identified as needing cloud migration.

Access Controls Implementation:

Another potential one-time cost could be for the acquisition and deployment of access control hardware and software solutions. As the costs are not yet fully determined, we will assess multiple vendors to find the most suitable and cost-effective options. Also, account for the costs of training and awareness programs.

Firewall Upgrade:

Allocate funds for the procurement of new firewall hardware or software licenses, installation costs, and any necessary training for IT staff. Consider factors such as advanced threat detection capabilities, ease of management, scalability, and cost when choosing which firewall will meet the need for ASJUSD not only today but into the future. Cost for hardware and software varies depending on the provider chosen, estimated at \$10,000 to \$40,000 for hardware. Plus an annual fee for software/licenses.

Conclusion:

The four-year technology plan for ASJUSD reflects our commitment to continuous improvement and innovation. As we implement these strategic initiatives, it's crucial to acknowledge that the landscape of education and technology is continually evolving and we recognize that our work is never truly finished. While our plan sets a solid foundation for the next four years, we remain attentive to emerging trends and advancements in technology. It's essential to maintain a culture of ongoing assessment and refinement, soliciting feedback from stakeholders and remaining agile in our approach. Flexibility and adaptability will be key as we navigate this ever-changing terrain. By staying responsive to the needs of our community and the evolving demands of technology, we can ensure that ASJUSD remains a leader in educational excellence.