



Las Lomas Elementary School District

Inclusive. Engaging. Inspiring.

District Technology Plan 2024-2029

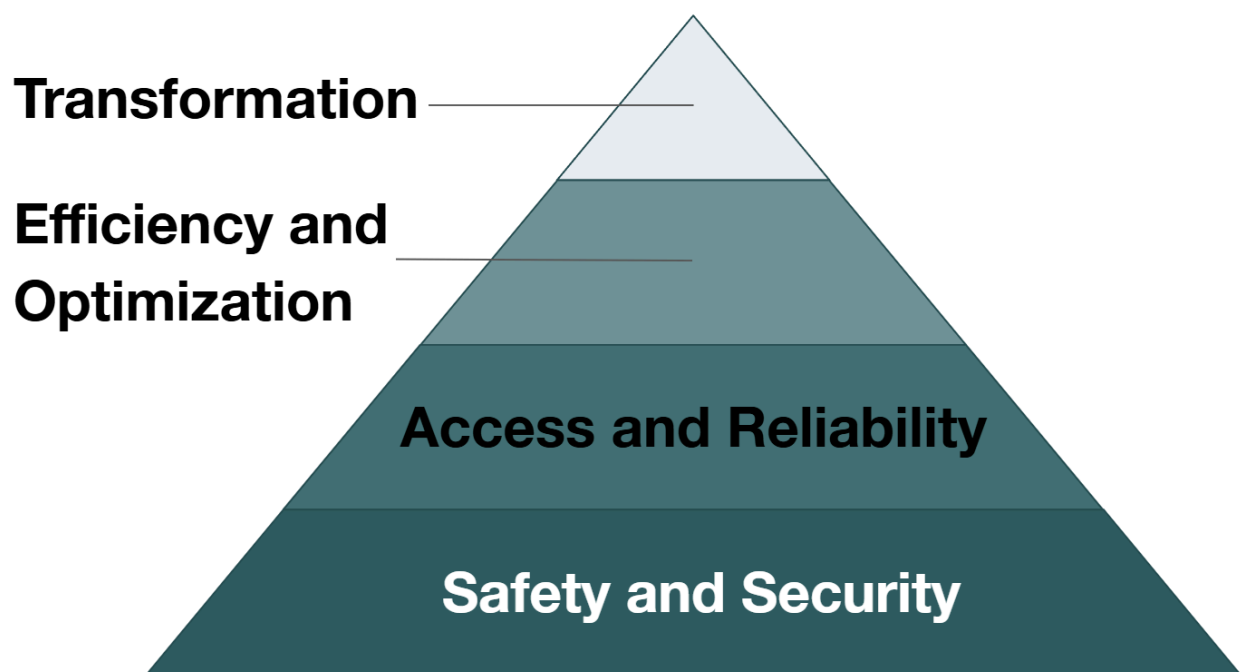
Introduction	3
Our Technology Hierarchy of Needs.....	3
Input and Evolution.....	4
Safety and Security	4
User Accounts.....	4
Filtering and Monitoring.....	5
Privacy.....	5
Access and Reliability	5
Internet.....	6
Network and Telecom.....	6
Student Devices.....	7
Staff Devices.....	7
Efficiency and Optimization	8
Understanding Staff and Student Needs.....	8
System Enhancements.....	9
Training and Development.....	9
Transformation	9
Appendix: Budget Estimates	11

Introduction

Technology will be a key support for the transformative educational experiences of each and every student at Las Lomas, but it requires foundational work in areas where the District is lagging.

Our Technology Hierarchy of Needs

By the end of the 2028-2029 school year, we plan to deliver those transformative educational experiences, guided by our Strategic Plan and LCAP. To get there, we need to move up our technology hierarchy of needs:



As with Maslow's hierarchy, progress in each area is independent of the others, but higher needs cannot be truly satisfied if lower levels are lacking.

LLESD's investments in hardware, connectivity and services have made our *Access and Reliability* quite robust. However, the other three areas require meaningful investments in technology, processes, training and culture.

This report addresses these needs in order, and outlines our plans to address them.

Input and Evolution

LLESD's Technology Director, Aidan Gould, replaced incumbent Jeff Honda in March of 2024, and assembled this plan based on extensive collaboration with district staff. The District Technology Committee will provide ongoing input to refine the technology plan, District needs will change and evolve, and project timelines will solidify as they are implemented. We expect that all of these inputs will lead to updates in the technology plan, which will be shared with the community and Board regularly.

Safety and Security

In addition to providing a strong foundation for the other technology work, it directly supports LCAP goal 2 (mental health) and Strategic goal 2 (wellness), by protecting students from harmful content and actors.

User Accounts

LLESD's security model uses multiple accounts per user, which are secured only with low-complexity passwords. Modern security practices recommend:

- Using a single identity provider, such as Entra, Okta or Duo
- Using at least two authentication factors, which can include:
 - Biometrics (fingerprint or face recognition)
 - Hardware (EG YubiKeys)
 - Passwords
 - One-time-codes (EG text messages)
- Ideally, avoiding passwords, push notifications and one-time-codes since they are less secure

Action steps:

We began a project during the 2023-2024 school year to identify a safe and easy system to fulfill these needs. We have conducted exploratory interviews with a number of peer districts and with technology vendors, and plan to do real-world testing in spring of 2025 in preparation for deployment in school year 2025-2026. This project should result in very high levels of account safety, protection from phishing and ransomware attacks, and greater ease-of-use for all staff.

We are also deploying stop-gap security measures for the users who are at the greatest risk for hacking and phishing.

Filtering and Monitoring

To protect the wellbeing of our students, and to comply with E-Rate, we apply several layers and types of internet filtering to help prevent their exposure to inappropriate content. Our filtering tools also report when student-generated searches and content show a risk of harm, and district administrative and counseling staff follow up on every report to ensure student safety.

Action steps: we have deployed filtering technologies from Securly, Google and Fortinet; and will continue to refine them so that students are not exposed to unsuitable content.

Privacy

The district reviews requests for new tools and extensions to verify that they meet our legal and moral requirements to keep students' data secure. For example, we review compliance with the (Federal) Family Educational Rights and Privacy Act and (State) Student Online Personal Information Act, which require schools and technology companies to protect students' information from non-educational uses.

Access and Reliability

Over the past decade, LLESB has made excellent investments in internet connectivity, network connectivity, student devices and employee devices.

Staff and student work is heavily dependent on reliable technology and network/internet access, so this work serves virtually every part of our LCAP and strategic goals. In particular, it is closely aligned with LCAP goal 3, Conditions & Climate, and Strategic goal 5, Facilities & Infrastructure.

Internet

Our approximately 1,300 students and staff are served by a dedicated four gigabit-per-second internet connection, and usage statistics from our network control panel show that this is more than sufficient for our current needs, and should be capable of supporting demand growth over the term of this strategic plan.

Action steps:

In order to ensure that we are receiving primary internet connectivity service at the best possible price, we are soliciting and evaluating bids. Whether new service is selected or existing service is continued, it will take effect at the beginning of the upcoming 2025-2026 fiscal year.

Later in the 2025-2026 fiscal year, we will select and implement redundant internet solutions for our school sites. Over the past year, there have been several outages that have disrupted the learning day, which we hope to prevent in the future.

Network and Telecom

Our network and telecom equipment was modernized in the 2021-2022 and 2022-2023 school years with funds from an infrastructure bond. The equipment selected is powerful and robust, and is supported by the manufacturer through August 2030.

Action steps: following the precedent of the previous network and telecom update, we plan to begin work on the update in the fall of 2028 with completion expected summer 2030. The previous network refresh was paid for in two fiscal years, which we expect to be the case during the planned refresh. Only the first fiscal year is covered in this strategic plan, but the District is planning and budgeting for this anticipated expense.

Student Devices

Every student at Las Lomas has an iPad or Chromebook. Devices for elementary students are kept in their homerooms, and devices for middle school students are issued to them at the beginning of the school year. Elementary students who need an additional device to use at home are offered one, and students of any age who do not have reliable internet access are issued a hotspot. Few students use either resource, so costs to support them are minimal.

Student iPads have a useful life of around eight years, and student Chromebooks have a useful life of around five years. When selecting new devices, we seek to balance costs, performance, durability and repairability. Beyond the financial benefit of increased longevity, there is a positive environmental benefit from reducing the frequency with which we replace our devices.

Action steps: we replace a certain number of student devices every year as they become obsolete, as well as devices that are too broken to repair or are lost. We expect to replace about 20% of student devices every year.

Staff Devices

Most staff at Las Lomas are issued Windows laptops with a typical service life of three to four years. Our security architecture does not support the use of Mac OS devices, but the updated architecture described above will. We are also replacing user devices with highly repairable and upgradeable laptops. These are expected to greatly reduce the financial and environmental impact of maintaining and upgrading our fleet of staff devices.

Action steps: we replace a certain number of staff devices every year as they become obsolete, as well as devices that are too broken to repair or are lost. We expect to replace about 30% of staff devices in 2025-2026 and 2026-2027, and start benefiting from a more financially and environmentally sustainable repairable/upgradeable laptop model in following years.

Efficiency and Optimization

We use technology to streamline staff work (giving them more time to focus on serving students) and allow them to do things they could not do before (allowing them to serve students better). The first two levels of our technology hierarchy serve the basic needs of teaching and learning, and here is where we begin to add value for our staff.

District data lives on dozens of interconnected systems, which are intended to automate, simply and enhance staff and student work. There are three ways we intend to improve this experience for staff:

- Deeper understanding of staff and student needs
- System enhancements
- Training

By freeing up staff time to focus on our students, this area promotes all of our LCAP and Strategic goals. It is particularly important for the action area data-driven instruction in LCAP goal 1, and for Strategic goal 3, Professional Development.

Understanding Staff and Student Needs

Technology enhancements need to be closely matched to users' needs in order to add value for users. For example, Kindergarten classes do not need Google Chromecasts, because they are incompatible with the iPads that students use. In contrast, we have learned from teachers that they are frustrated with doing duplicate data entry for report cards, and are working on ways to save them time by transmitting that data automatically. Deeply understanding staff and student needs is the key to ensuring that we leverage technology to reduce low-value added activities.

Action steps: the principal ways that we are working to understand user needs are:

- Reestablishing the technology committee
- Holding office hours for staff to request assistance and training
- Conducting classroom observations to identify where technology can simplify or enhance teachers' work

- Centralizing IT request in a ticketing system to provide a comprehensive view of user needs

System Enhancements

Once we understand users' needs, we can introduce new systems and functionality that fulfill those needs. In the previous section, we discussed that teachers sometimes need to enter grades in two systems. For the 2024-2025 school year, we introduced a system enhancement that transferred middle school grades between those systems automatically. We will continue to develop technical solutions to reduce the clerical burden on teachers and staff.

Action steps: the technology team makes hundreds of improvements every year, ranging from deployment of new systems to minor tweaks. We test each improvement before it is deployed and check in regularly with affected stakeholders to ensure we are seeing the expected results.

Training and Development

The final tactic for reducing the burden on educators is training staff to use new and existing systems more effectively. We take a multi-modal approach to meet users where they are, providing individual, group and pre-recorded systems training.

Action steps: each year, the technology team runs several in person training sessions during our professional development days and new employee onboarding, smaller training sessions as needed, cyber-security training for staff and students, and recorded training and reference materials for on-demand access.

Transformation

Our ultimate goal is educational, creative, fulfilling experiences for our students that were impossible or unimaginable before. Analytical tools can help us understand each student's unique needs, and generative AI tools can help create educational experiences tailored to meet them. Assistive

technology can help students overcome challenges with verbal communication.

These transformative innovations, however, will not come from leaders, committees or vendors; they will come from our learners and educators who have been given the strong foundation for success laid out in our technology plan.

Appendix: Budget Estimates

Estimated December 2024

	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029
LL Teachers/ Staff	\$180k		\$90K*	\$90K*	\$90k*
LE Teachers/ Staff					
LE Mac Lab					\$80K
District Office	\$25k			\$15K*	\$15K*
Chromebooks	\$228K	\$115K	\$120K*	\$130K*	\$140K*
iPads			\$50K	\$50K	
Projection Equipment			\$75K	\$75K	\$75K
Printers and Other Equipment	\$89K	\$89K	\$90K	\$91K	\$92K
Network and Telecom Equipment**					\$175K**
Network, Server, other Licensing	\$175K	\$180K	\$185K	\$190K	\$195K
Internet and Phone	\$100K	\$105K	\$110K	\$115K	\$120K
Expenditures (estimated)	\$797K	\$489K	\$720K	\$756K	\$982K
Budget	\$900K	\$600K	\$700k	\$700K	\$700K

Please note that the 2024-2025 budget lines for Staff and Student Devices (Chromebooks) are higher than in other years because no devices were purchased in 2023-2024.

* Absolute earliest that these could be necessary, ideally these expenses can be pushed 2-4 years later

**Expected \$175K in 2028-2029 and 2029-2030 based on support lifespan of existing equipment