



# Strategic Technology Plan 2021-2031 2023-24 Annual Update

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# Introduction

The 2021-22 school year was the first full year of implementation of the District Strategic Technology Plan. This document is the second annual update to this Plan. The first two years of implementation of MDUSD's Strategic Technology Plan have been filled with activity supporting student-centered learning and ensuring schools have increased support and functional technologies. Important highlights for 2022-23 include

- significant upgrades to the District's security camera system,
- initiation of District-wide managed print services to provide functioning, supported printers and copiers to fulfill the printing needs of schools,
- the use of Measure J and other funding sources to update audio-visual standards and equipment in classrooms and office spaces, and
- the initiation of work to plan and build a robust, modern network at all District buildings and schools.

The 2023-24 school year will bring an increased focus for MDUSD students, teachers, and administrators on professional learning and use of technology in the classroom.

In 2023-24, just as in 2022-23, preparing students for careers, college, and life in the 21st Century demands careful consideration of the role technology plays in education. Mt. Diablo Unified School District (MDUSD) believes that students deserve regular opportunities to learn in technology-rich learning environments that reflect the technological world outside the classroom. Stated bluntly, we can only expect that our students will thrive as productive citizens beyond high school if they have regular, embedded opportunities to learn through technology during their TK-12 experiences.

The 2023-24 update of this Strategic Technology Plan further solidifies a vision for learning and teaching with technology in MDUSD. The revised goals and action steps detailed here are designed to meet three critical imperatives:

1. Empower teachers to provide relevant, rigorous, and meaningful instructional opportunities through technology.
2. Provide students with regular, meaningful opportunities to engage with the modern world through technology to become college and career ready.
3. Ensure the District can maintain the necessary technologies and support systems to ensure every student graduates ready to thrive in a technology-rich world.

This is not merely a technology plan; it is a learning plan, supported by and empowered through technology. Implemented with fidelity, this plan will set MDUSD on a path to equitable, student-centered learning. As a District, we continue to build an excellent platform from which to launch a significant effort to modernize our approach to technology for learning and teaching.

## Plan Development Process

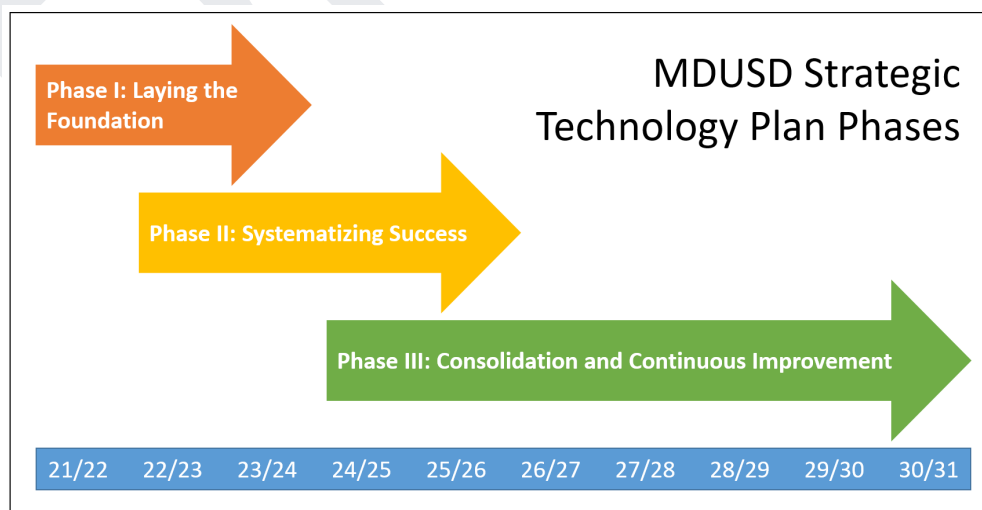
This revised plan has been drafted in extensive consultation and collaboration with District stakeholders, and represents the collective efforts of students, parents/guardians, community members, teachers, administrators, and other District staff. The plan is guided by MDUSD’s District Goals, the District Local Control and Accountability Plan (LCAP), and the 2021 Systemic Instructional Review (SIR) report conducted by the California Collaborative for Educational Excellence (CCEE).

Building on the work of the 2020-21 and 2022-23 Strategic Technology Planning Task Forces, the 2023-24 Task Force met three times in Spring, 2023, to discuss the state of technology in MDUSD, identify progress toward the 2023-24 plan goals, and identify new priorities for the revised plan.

Several themes emerged during Task Force meetings. These themes are heavily represented in the revised Action Items that form the core of this plan. First, there is a need for a more systemic approach to coordination and collaboration by the Technology Integration Leaders (TILs) to support professional learning and the use of technology in classrooms. Second, there is a continued need for communication of clear expectations around Digital Citizenship, learning goals with technology, and student safety and privacy, and a need for collaboration across schools related to these expectations. Third, there is a need to continue to support schools in their planning around sustaining their efforts in true 1:1 programs. And fourth, there is a need to continue and to solidify the District’s work to standardize and centralize technology acquisitions.

## Plan Phases

This plan is organized in three defined, achievable phases. The phases necessarily overlap in recognition of the complexity of a District-wide process. The work to be done in 2023-24 demonstrates that Phase II (Systematizing Success) is underway. Where Phase I established new systems by which District technology is acquired and maintained, Phase II begins the work of ensuring the new systems created are supported, clearly understood by all stakeholders, and embedded in the regular operations of the District.



### Phase I: Laying the Foundation (2021/22 to 2023/24)

Phase I is designed to 1) create District systems and processes, and create scalable programs, such as 1:1 schools, 2) align resources to support systemic progress, and 3) address several long-standing and critical challenges inhibiting progress, such as the modernization of MDUSD’s technology infrastructure. Under normal circumstances, Phase I would employ a “go slow to go fast” approach to change, laying a foundation for aligning and systematizing efforts across the entire District. However, acknowledging the imperative to maintain equitable access to technology, and with the input of significant one-time resources related to the COVID-19 pandemic, it is critical that Phase I be implemented quickly. Many elements of this plan that are prerequisites for other elements do require time and planning to implement. For instance, MDUSD’s aging network infrastructure cannot be upgraded overnight and must be planned carefully to meet current and future needs. Network improvements require a long-range approach to refresh equipment and services and keep them up to date. At the same time, several critical core infrastructure and connectivity issues must be addressed to the extent possible in the short term.

### Phase II: Systematizing Success (2022/23 to 2025/26)

The second phase of this plan focuses on implementation and systematization of the activities set in motion in Phase I. For instance, once a network plan is completed, an integrated approach to deployment will be undertaken in conjunction with facilities work at District sites. And once technology standards are adopted, acquisition, deployment, and support activities must be adjusted to match the new standards.

### Phase III: Consolidation and Continuous Improvement (2024/25 to 2030/31)

During the consolidation phase, with the majority of technology supports in place, schools will be empowered to take full advantage of the systems and structures implemented in earlier phases. Continuous improvement efforts will be undertaken to elevate practice, building on foundational successes.

## Strategic Technology Planning Task Force Members

MDUSD thanks the following individuals who participated in the 2021-22 Strategic Technology Planning Task Force.

Joseph Alvarico	Teacher
Aurelia Buscemi	Elementary Site Administrator
Shannon Cherry	Parent
Amneris Galarza	Parent
Jeff Garaventa	Technology User Support Manager
Megan Gerds	Curriculum Specialist

Lisa Gonzales	Chief Business Officer
David Hevel	Teacher
Kevin Honey	High School Site Administrator
Samantha Hopper	Teacher and Technology Integration Leader
Jeffrey Juico	Teacher
Jennifer Martin	Administrative Secretary
Mei-Ling McMurray	Student
Jorge Melgoza	Assistant Director, Equity and Disproportionality
Suleyma Moss	Middle School Site Administrator
Tara O'Keefe	Network/Systems Administrator
Shawna Patterson	Teacher and Technology Integration Leader
Mia Ricci	Student
Tyler Rosecrans	High School Site Administrator
Matt Rosso	Network Technician III
Amayra Samaniego	Parent
Robert Sidford	Director of Technology and Innovation
Amy Sudrla	Director, Special Education
Greg Taylor	Director of Technology, City of Concord
Martha Thomas	Elementary Site Administrator
Ray Tjen-A-Looi	Director of Assessment, Research & Evaluation
Erin Vallejo	Educational Technology Coordinator
Alex Zablah	Senior Network/Systems Administrator

# Goal 1: Modern Learning and Teaching

*We believe MDUSD should foster a culture of lifelong learning. Students and staff should learn and use modern strategies and methods of utilizing technology to work effectively and efficiently. Teachers should be empowered to implement strategies for engaging every learner.*

## Progress

MDUSD completed the rollout of a District-wide 1:1 Program in 2022. Every student in grades 2 through 12 has a Chromebook for their own use in school and at home. With this elevated foundation for modern learning, we can better turn our attention to supporting technology in instruction. This 2023-24 update to Goal 1 of the Strategic Technology Plan focuses heavily on the curation of approved digital tools, the streamlining of digital tool review/approval, and professional learning to support teaching and learning with technology.

## 2022-23 Highlights

MDUSD made significant steps toward Modern Teaching and Learning during the 2022-23 school year, despite the fact that MDUSD was without an Educational Technology Coordinator for much of the year. Highlights include

- a curriculum adoption process that focused substantially on digital components to support traditional curricular and hands-on materials,
- maintenance of a District Approved Digital Tools list containing resources for teaching and learning that align with standards and meet digital privacy standards,
- the initiation of professional learning around District-standard technologies, including Promethean ActivPanels and Google Classroom, and
- continued work by Technology Integration Leaders (TILs) as a community of practice centered on technology integration and modern learning.

## Strategies

<b>Strategy 1.1: All students will regularly use technology at school and at home to engage with curriculum</b>
<b>Action Step 1.1.1:</b> Adopt and implement a framework for learning and teaching with technology that articulates a core set of instructional practices that support student modern learning skills and technology literacy skills as outlined in the Common Core State Standards, International Society for Technology in Education (ISTE) Standards for Students, and California Model School Library Standards.
<b>Action Step 1.1.2:</b> Implement and communicate a District-wide Digital Citizenship Curriculum, designed to be embedded within curricular content at all grade levels.

**Strategy 1.2: Provide quality, curriculum-aligned digital resources for learning and teaching**

**Action Step 1.2.1:** Maintain a set of core digital platforms, such as Google Classroom, to ensure consistent, reliable access to curricular materials for students across learning modalities. Enhance capabilities for schools to manage these tools effectively, such as through administrator access to Google Classroom.

**Action Step 1.2.2:** Refine the MDUSD Approved Digital Tools list to ensure the District continues to comply with Federal and State laws and meets our robust data privacy and security standards, minimize the number of tools used across the District, and build informational and professional learning resources to help staff utilize these tools.

**Action Step 1.2.3:** Ensure that whenever possible, adopted technologies meet the needs of all students, including those with special needs.

**Action Step 1.2.4:** Continue to ensure that new curriculum adoptions include a robust digital component to support digital access to content for students and teachers.

**Action Step 1.2.5:** Communicate and implement the Technology Scope and Sequence and grade-level expectations to ensure consistent high expectations for all students.

**Strategy 1.3: Support all teachers and instructional staff with high quality resources and professional learning**

**Action Step 1.3.1:** Create and maintain a schedule of required and suggested training opportunities to ensure staff in all job functions have differentiated, timely access to professional learning. Include training on the Technology Scope and Sequence and District Digital Citizenship Curriculum. Encourage all educators to complete the Google Educator Level 1 course and District-provided Promethean training.

**Action Step 1.3.2:** In collaboration with Technology Integration Leaders (TILs) create and maintain a comprehensive and accessible digital repository of training and professional learning resources to support instructional use of core digital platforms and applications, digital tools, data privacy and security practices, and other technologies. This site will include documentation, videos, how-to guides, and training schedules.

**Action Step 1.3.3:** Maintain the District Technology Integration Leader (TIL) program to support schools with expert technology integration leadership.

**Action Step 1.3.4:** Create a set of supportive resources to foster a clear vision and common understanding of instructional priorities, including walk through protocols, and examples of strong



technology-rich instructional practices.

**Action Step 1.3.5:** Create a list of suggested technology proficiencies for staff in various job roles with aligned supports and training opportunities.

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# Goal 2: Equitable Access to Technology for Learning and Teaching

*We believe that educational, socioeconomic, neurodiverse, and racial equity are best advanced through a centralized plan and clear recursive process for all students to have regular access to technology regardless of school location or access levels at home. Resources should be allocated equitably across levels.*

## Progress

By focusing intentionally on providing all students with the tools they need and the standardization of technology in classrooms across the district, MDUSD is moving toward an equitable environment for student learning with technology.

In the past each school site, department, or program has largely made isolated decisions regarding the funding and acquisition of student and staff technology. 2022-23 saw the continuation of several programs that provide a new, District-wide focus on providing all students and staff with the necessary technology tools.

## 2022-23 Highlights

MDUSD realized significant progress during 2022-23 related to equitable access to technology for teaching and learning, including

- deployment of a District-wide 1:1 program in which every student in grades 2 through 12 has a Chromebook issued to them for use at school and at home,
- District-wide deployment of standardized printers ,
- adoption/deployment of Promethean 86" ActivPanel 9 Premium for all classrooms at all K-12 sites,
- adoption of Incident IQ to provide a more streamlined and accessible ticket and asset management system,
- adoption and implementation of ClassLink to provide consistent and customizable access to approved student apps and tools across disciplines.

## Strategies

<b>Strategy 2.1: Ensure all students and staff have access to modern technologies necessary for modern learning and teaching</b>
<b>Action Step 2.1.1:</b> Maintain centrally-supported 1:1 programs at all MDUSD schools whereby all students in grades 2 through 12 have a device issued to them for their own use at school and at home. Provide sufficient devices for all students in grades K-1 for use at school.
<b>Action Step 2.1.2:</b> Maintain teacher laptops at all schools by providing a supported District standard laptop device. Ensure schools establish and follow appropriate procedures to minimize device damage and loss.
<b>Action Step 2.1.3:</b> Maintain a fully budgeted District-wide technology refresh plan to centralize technology purchasing on a three-to-four year cycle and ensure student and teacher/administrator devices are up-to-date and capable of supporting daily tasks.
<b>Action Step 2.1.4:</b> Maintain a centralized asset management system to serve all District sites as a single repository for mobile device inventory, and expand inventory to include audio-visual equipment, printers, and staff devices.
<b>Action Step 2.1.5:</b> Operationalize support for the District 1:1 program by providing centralized support for warranty repairs, break-fix, and device deployment coordinated collaboratively through the Technology and Information Services and Purchasing and Warehouse Departments. Ensure continued staffing and resources to support this move to centralized provision of technology deployment services.
<b>Action Step 2.1.6:</b> In collaboration with stakeholders, maintain and regularly update a comprehensive list of standard devices, peripherals, assistive technologies, and other equipment to ensure equitable support can be provided for technology in schools. Ensure that purchases made by school sites conform to established standards regardless of funding source.
<b>Action Step 2.1.7:</b> Establish and regularly update technology equipment specifications for elementary, middle, and high school classrooms, including a process for approving exceptions to these standards for specific use cases.
<b>Action Step 2.1.8:</b> Establish a District Technology Standards Committee composed of stakeholders to inform the selection of technologies for District-wide implementation and support.

**Strategy 2.2: Support home device, connectivity, and technical support needs to the extent possible**

**Action Step 2.2.1:** Maximize opportunities for students and families to access the District network while at school outside of regular school hours by providing external WiFi coverage in common areas and facilitating access at school programs.

**Action Step 2.2.2:** Regularly maintain and communicate with families about low-cost options for Internet service. Collaborate as possible with industry partners to provide information and access to programs. Provide information to schools to assist families in accessing these options.

**Action Step 2.2.3:** Provide resources to schools to assist site staff to support families' questions, including how-to guides and a web-based help page.

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# Goal 3: Professional and Timely Support

*We believe that all students, staff, and families should be expertly and professionally supported in their effective use of technology within learning communities to maximize student achievement and build modern learning skills.*

## Progress

The significant and systemic changes to technology support that occurred during the 2021-22 school year were continued in 2022-23. Led by a dedicated team of technicians, technical support to staff is provided through a robust work order system, remote support has been enhanced, a refresh of staff devices is almost complete, and a new process for supporting students' 1:1 devices has been systematized. A central Technology Help Desk continues to provide support to staff to address immediate hardware and software issues and to report when technology at sites is not operational.

Each school has identified a District-funded Technology Integration Leader (TIL) allowed 6 hours per month or a release period (secondary level) to assist site staff with technology-related curriculum and hardware support. These staff attend monthly meetings to coordinate support. In-house classes are created by the IT department on a variety of topics. 2022-23 Highlights

Important progress during the 2022-23 school year included

- the reorganization of the Department of Information Technology to better support the needs of the District,
- continued District-wide use, and planned upgrade of a technology work order system through which all staff can request timely technology support, communicate with technicians, and receive progress updates,
- continued enhancement of technicians' capacity to provide remote support for staff, reducing response times for many support requests,
- deployment and consolidation of additional systems to centrally manage District devices, including Chromebooks, teacher laptops, copiers, printers, and audio-visual equipment,
- planning for a major upgrade to the District website, to include improved IT support resources, and
- inclusion of training in IT technicians' regular work schedule.

## Strategies

**Strategy 3.1: Establish an enterprise model of technology support to best meet the needs of a modern, technology rich organization.**

**Action Step 3.1.1:** Upgrade and build on the District-wide technology work order system to improve the visibility to users of technology support requests. Ensure all staff can enter work orders, and that designated site staff may view open work orders at their sites.

**Action Step 3.1.2:** Continue an equitable zone system of deploying field technicians, prioritizing need rather than “time on site,” and fostering collaborative support and project work among technicians.

**Action Step 3.1.3:** Build on existing strategies and tools to address user needs in the most timely manner, including by maximizing the use of remote support software for deployment, troubleshooting, and technical support.

**Action Step 3.1.4:** Strengthen collaborative efforts between IT staff and site leaders, including Technology Integration Leaders (TILs), through resources and training and by allowing access for TILs to the work order system.

**Action Step 3.1.5:** Refresh and regularly update the Department of Information Technology web page enabling users to more readily access resources for self-help and include commonly requested support and training resources.

**Action Step 3.1.6:** Identify additional innovative ways to increase technical support capacity, such as through technical support electives for students, internships, etc.

**Action Step 3.1.7:** Establish clear, ongoing, and job-embedded training options for IT staff that empower technicians to perform their important functions expertly and efficiently, and provide opportunities for all staff to improve their skills and advance to more senior positions as they become available within the District.

**Strategy 3.2: Standardize device management, deployment, and removal from service, to ensure efficient, timely support.**

**Action Step 3.2.1:** Require use of the District asset management system for all check-in / check-out of devices, eWaste, and invoicing.

**Action Step 3.2.2:** Ensure all District devices are managed centrally through systems that allow efficient deployment of hardware and software and allow remote support.

**Action Step 3.2.3:** Ensure all devices approaching end of life are removed from the District inventory and eWasted in a timely manner to increase compatibility, reliability, and functionality of devices in

service. Establish clear communication channels among schools, Purchasing and Warehouse, and Technology and Information Services to ensure timely eWasting of equipment.

**Action Step 3.2.4:** Establish tiered support levels for all District-standard technologies to clearly outline what support users can expect, and identify end-of-life dates. Include refresh dates for District-issued Chromebooks and staff laptops.

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# Goal 4: Robust Network Infrastructure and Technology Operations

*We believe that a student-focused, results-oriented organization must provide secure, reliable, and effective technology services to enable a first-rate learning environment where students, staff, and families can achieve their collaborative and individual goals.*

## Progress

The District's increasing reliance on data, information, and technology services in recent years has significantly elevated the need for MDUSD to deploy modern, updated, and supported technologies. During 2022-23 MDUSD continued to upgrade and modernize core technology systems. While most throughout the District remain unaware of these specific changes, they benefit directly through improved reliability and functionality of the District's network infrastructure and technology operations. In addition to sufficient, scalable Internet and WAN capacity to meet the ongoing needs of all sites, meaning Internet "bandwidth" is no longer a concern for District technology users, recent work has included upgrades to CCTV security cameras and systems, repairs to fiber-optic and ethernet cabling, and pilot installations of networking equipment in preparation for a broader Measure-J-funded effort.

One of the most important initiatives presently underway is the design and rebuilding of our District network infrastructure. We have begun working with architects, and significant progress will be made on prioritized sites in 2023-24. This includes anticipated replacement of the District-wide phone system, an outdated PBX system.

Work is needed to establish policy around data systems. A lack of coordination and integration among systems has resulted from departments and schools acquiring systems without a centralized plan. This issue continues as it did in 2022-23. Multiple disparate systems have been deployed to solve similar business problems, such as document management, which is currently undertaken through a combination of an end-of-support document management system, site and department share folders, cloud storage through Google, and various third-party tools. This results in an inability to effectively manage the District's data, establish retention policies, and create data access and use policies.

## 2021-22 Highlights

Several important initiatives have been undertaken in 2021-22, including

- sustaining Internet throughput and WAN capacity at all sites to 2 Gbps, scalable as needed to meet ongoing needs and anticipated increases now that MDUSD is a 1:1 District,
- a comprehensive network redesign is underway, with thirteen sites being studied for round one upgrades, and
- the District's CCTV security camera system is in the process of being upgraded, with new cameras, new software, new Data Center hardware, and a refresh budget established.



## Strategies

### **Strategy 4.1: Provide adequate connectivity for learning, teaching, and business operations through a reliable future-proofed modern network.**

**Action Step 4.1.1:** Maintain the needed Internet and WAN throughput to schools and central services sites, utilizing the federal E-Rate program where possible, to ensure user needs are met, and bandwidth is scalable. In future planning, consider the recommendations outlined by the State Educational Technology Directors Association (SEDTA) for peak utilization capacity for digital learning.

**Action Step 4.1.2:** Create thorough, detailed standards for network infrastructure at all District sites to support anticipated needs and a 40 Gbps backbone, including wired and wireless networks, structured cabling, fiber optic and ethernet cabling, routing and switching, MPoE/MDFs/IDFs.

**Action Step 4.1.3:** Create a complete network design, including designs for each site, informed by assessments, educational specifications, and standards.

**Action Step 4.1.4:** Coordinate the implementation of a managed project in prioritized phases - initially prioritizing schools with known critical connectivity issues - to efficiently and responsibly utilize available funding sources, such as Measure J, E-Rate, and the Elementary and Secondary School Emergency Relief Fund (ESSER III) in modernizing the network at all District sites.

**Action Step 4.1.5:** Concurrent with the network modernization project, continue to build out an infrastructure refresh plan as a component of the District's Deferred Maintenance Plan to ensure the cyclical replacement of network infrastructure components, including an annual budget.

### **Strategy 4.2: Modernize and sustain core business and academic systems**

**Action Step 4.2.1:** Regularly evaluate the functionality and interoperability of core business and academic systems to determine current and future needs and inform potential changes or acquisitions of new business and academic systems.

**Action Step 4.2.2:** Continue to evaluate cloud hosted options for critical business systems, such as our Enterprise Resource Planning (ERP) system, and Student Information System (SIS), to improve reliability, sustainability, and disaster recovery.

**Action Step 4.2.3:** Regularly evaluate existing business systems to consider current and future needs and determine if a transition to new systems is warranted and feasible.

**Action Step 4.2.4:** Evaluate the viability of deploying a District-wide document management system to meet the document storage and retrieval needs of District departments.

**Action Step 4.2.5:** Consider transitioning from the current outdated Private Branch Exchange (PBX) phone system to a modern VoIP system as part of the network refresh program.

**Action Step 4.2.6:** Define standards and establish District policy for a long-range plan for site security cameras, including purpose, standard locations, and refresh cycle.

**Action Step 4.2.7:** Modernize District data policies, including data access and retention policies, to best protect District data and consolidate governance activities.

**Strategy 4.3: Ensure continued, reliable information technology operations by aligning available resources to technology needs.**

**Action Step 4.3.1:** Align staffing and funding resources to adequately support existing and future district technology systems. Consider the need for failover for critical services to avoid knowledge loss in the event of staff turnover by establishing training and pathways for junior technicians to support core systems.

**Action Step 4.3.2:** Work alongside union partners to modernize additional job descriptions in accordance with the technology needs of a large district.

**Action Step 4.3.3:** Provide technicians with dedicated and job-embedded training aligned to District systems, including time within the contract day for training.

**Strategy 4.4: Establish modern business continuity and disaster recovery practices and deploy needed systems to ensure the continued, reliable operation of critical business systems.**

**Action Step 4.4.1:** Maintain the reliability of data center operations through a modern Hyperconverged Infrastructure (HCI) model.

**Action Step 4.4.2:** Maintain backup strategies to apply industry standard practices to protect critical District data from disasters and security incidents, and provide for timely recovery.

**Action Step 4.4.3:** In collaboration with all District departments, conduct a thorough business impact analysis and prepare a business continuity / disaster recovery plan. Ensure that MDUSD department “business owners” are designated for all critical business systems to inform desired service levels.

**Action Step 4.4.4:** Assess the feasibility and desirability of establishing a secondary data center to provide additional failover and disaster recovery capacity, and the potential addition of a second Internet Service Provider.

# Goal 5: Comprehensive Cyber Security and Data Privacy

*We believe that effective technology use by students, staff, and families requires safe and secure tools and an environment in which all technology users value privacy and security and are prepared with skills and knowledge to interact appropriately with technology.*

## Progress

Protecting a large, complex computer network and its users requires a comprehensive approach to information security and cybersecurity. MDUSD has made significant progress throughout 2022-23 related to cybersecurity. In addition to the maintenance and acquisition of new and updated technology systems, important security assessment work has been undertaken. MDUSD has also acquired technologies to better assess and mitigate security risks.

## 2021-22 Highlights

While specifics related to cybersecurity initiatives underway should not be shared publicly, the following improvements have been a focus of the District’s work in 2021-22:

- streamlining and improving user security and authentication within the Department of Information Technology,
- upgrades to several core systems within IT, including adoption of managed systems such as managed detection and response (MDR) and print services,
- creation of procedures for security incidents and development of incident response plans, and
- maintenance of a comprehensive risk register documenting current risks and progress toward mitigation.

## Strategies

<b>Strategy 5.1: Improve, sustain, and test the District’s cybersecurity posture</b>
<b>Action Step 5.1.1:</b> Create and implement a comprehensive District Information and Cyber Security Plan with a strong focus on implementing the Center for Internet Security (CIS) Critical Security Controls.
<b>Action Step 5.1.2:</b> Maintain updated systems to protect District users, technologies, and data, including firewall, antivirus, network access control, authentication and user access management.
<b>Action Step 5.1.3:</b> Continue to build incident response plans to ensure effective, timely responses to a variety of possible technology and security incidents.

**Action Step 5.1.4:** Continue to conduct regular security vulnerability assessments and penetration tests to verify and improve security protections.

**Action Step 5.1.5:** Assess, manage, and mitigate security risk by maintaining an up to date risk register discussed regularly by District leadership.

**Strategy 5.2: Establish a clear and comprehensive culture of data stewardship, data privacy, and data security.**

**Action Step 5.2.1:** Establish and implement data privacy and security standards and practices as outlined in the Consortium for School Networking's (CoSN) Trusted Learning Environment (TLE) framework ([trustedlearning.org](https://www.trustedlearning.org)), and strive to earn the TLE Seal.

**Action Step 5.2.2:** Consolidate and reduce options for user, department, and school data storage to provide ready access to needed data while minimizing the potential for unintended exposure of sensitive and personal data. Expand staff use of Google Drive cloud-stored data to improve safety and security and decrease the potential for data loss.

**Action Step 5.2.3:** Incorporate data privacy and cyber security awareness into training for all staff. Provide staff with resources and guidelines on data privacy and security in a cloud environment.

**Action Step 5.2.4:** Continue to maintain an integrated platform for classroom management, filtering, and behavior alerting to facilitate safe teaching and learning with technology.

# Goal 6: Sustainability

*We believe that ensuring students, staff, and families have regular access to essential technologies demands that technology be acquired purposefully and sustainably.*

## Progress

With the substantial technology acquisitions made by MDUSD, the need to sustain these technologies into the future has been carefully considered. One-time funding opportunities have been strategically utilized. MDUSD has placed a priority on creating and maintaining enduring partnerships with responsible vendors to best utilize available resources. The use of cooperative and “piggyback” contracts for purchasing has facilitated and simplified these efforts. Importantly, while planning for the construction of a refreshed network infrastructure, attention has been given to emergency repairs that where possible support the needs of this future network.

## Strategies

<b>Strategy 6.1: Identify efficiencies and cost-savings created by technology acquisitions and clearly articulate funding sources when acquiring technology.</b>
<b>Action Step 6.1.1:</b> Continue to develop and communicate a technology refresh plan outlining which technologies are provided centrally to all sites and which are the responsibility of individual sites. Incorporate all existing and potential funding sources, such as E-Rate and relevant bond measures.
<b>Action Step 6.1.2:</b> Create a 1:1 technology sustainability plan to ensure program continuation and to identify potential cost savings and efficiencies created. Include the acquisition of tools to monitor 1:1 technology use and impact, digital tools use and impact, and overall program cost. Develop and communicate expectations for cost saving efforts, including reduced use of paper and increased use of digital communication for students and families.
<b>Action Step 6.1.3:</b> Maintain technologies to improve analytics related to the instructional use of digital tools to inform continued and future acquisition, and make sustainable, learning-focused decisions about acquisition of supplemental digital materials.

<b>Strategy 6.2: Maximize the strategic use of available targeted, one-time, and grant funding opportunities</b>
<b>Action Step 6.2.1:</b> Establish a clear review process for technology hardware and software purchases utilizing targeted, one-time, and grant funding to ensure the District can identify best practices and scale as appropriate. Include consideration of non-standard technologies for specific purposes, such as assistive technologies.

**Action Step 6.2.2:** Create a register of proposed learning technology projects to enable appropriate targeting of grant opportunities informed by District priorities.

**Strategy 6.3: Modernize technology purchasing practices to leverage efficiencies**

**Action Step 6.3.1:** To the extent possible, continue to leverage allowable cooperative and piggyback contracts to streamline and standardize purchasing and assure a professional level of service for technology acquisitions. Reduce time-consuming bidding processes to enable staff to focus on vendor partnerships, and establishment of and accountability to District standards.

**Action Step 6.3.2:** For proposed technology hardware and software acquisitions, require multi-year budgeting be considered prior to approval.

**Action Step 6.3.3:** For proposed software acquisitions, require vendors complete a District software acquisition security checklist in collaboration with sponsoring departments and schools to ensure compatibility, appropriate privacy and security, and to ensure any additional costs or resources required due to the acquisition are minimized.

**Action Step 6.3.4:** Seek and maintain long-term partnerships with vendors that provide stability, support, professionalism, and commitment to the needs of MDUSD.

# Goal 7: Technology Governance, Continuous Improvement, and Communication

*We believe that technology oversight, policies, and capacity building exercises should be inclusive, consultative, guided by best practices, and reflect the needs of all stakeholders.*

## Progress

With progress toward the above Goals of this Strategic Technology Plan, governance initiatives will become more readily addressable. Improved standardization of hardware and software acquisition, and streamlined technology support operations better enable the Information Technology Department to provide for the increasingly complex needs of District staff and students. A policy framework governing District technology practices was delayed in 2022-23 due to ongoing work around District policy adoption, but information and cybersecurity priorities, data use, and other critical services will be an important goal in 2023-24. Ensuring the continued success of this Strategic Technology Plan requires that certain key governance activities occur. Additionally, governance activities at each school, including site technology planning, will become increasingly important to support instructional goals.

## Strategies

<b>Strategy 7.1: Align the prioritization, acquisition, management, implementation, and progress monitoring of District technologies with District priorities.</b>
<b>Action Step 7.1.1:</b> Create and regularly update a comprehensive technology policy framework to ensure vertical and horizontal alignment of District priorities and compliance efforts. This framework should encompass board policy, administrative regulation, administrative procedures, and Department processes.
<b>Action Step 7.1.2:</b> Establish a stakeholder-driven technology standards committee to create, revise, and communicate District technology standards for devices, systems, and software. This committee would also consider emerging technologies to ensure the District can best anticipate future educational needs. Importantly, this committee will also consider the needs of all students, including those with special needs and English Learners.
<b>Action Step 7.1.3:</b> Continue governance activities related to the approval of digital tools to effectively assess educational need, security and privacy implications, and cost considerations for all digital tools used in MDUSD. Ensure the continuation of a clear process for submitting additional digital tools for consideration.

**Action Step 7.1.4:** Establish a clear process whereby District leadership is empowered as decision-makers regarding information security and cybersecurity, including the identification, assessment, and management of risk.

**Action Step 7.1.5:** In coordination with the development of District policy regarding data use, management, retention, and access, consider the creation of a formal data governance structure to oversee District data priorities.

**Action Step 7.1.6:** Continue to annually update the District Strategic Technology Plan to reflect changing needs and incorporate stakeholder input. Establish a process to ensure active, meaningful participation of stakeholder groups in the plan revision process.

**Strategy 7.2: Support schools to focus on continuous improvement**

**Action Step 7.2.1:** Support schools to plan sustainably for technology initiatives through development and use of a simple template to outline and clearly communicate instructional priorities, device acquisition priorities, and professional learning supports.

**Action Step 7.2.2:** Require all schools to participate in the Technology Integration Leader (TIL) program, and utilize these experts to ensure school technology planning, including for emerging technologies and innovative programs, is aligned to District priorities and considers sustainability.

**Strategy 7.3: Communicate progress with stakeholders**

**Action Step 7.3.1:** Regularly communicate progress on the District Strategic Technology Plan through the District website, family communication platforms, and presentations to the Board of Education.