Elmbrook Schools
become what's next

TECHNOLOGY & LIBRARY PLAN

2024-2027

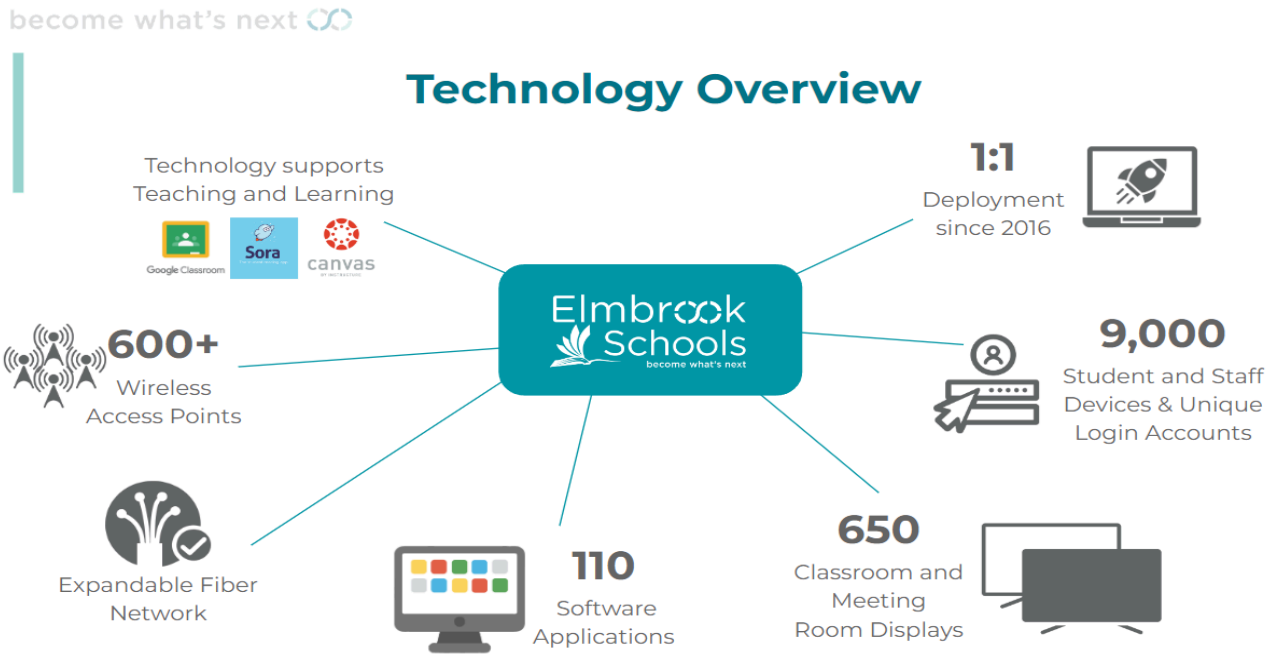
TECHNOLOGY & LIBRARY PLAN

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Executive Summary

The purpose of this plan is to meet the strategic objectives of the district by deploying technology and library solutions in support of the teaching and learning needs of our students and staff. While instructional design and technologies change over the years, these principles drive decision making and allocation of digital, print, and technology resources:

- Alignment to teaching and learning priorities
- Strategic deployment of limited financial and human resources
- Secure data and information using industry best practices
- Provide families with tools and information to be active partners in their child's education
- Offer 24x7 access to most technology and library resources
- Support the continuous improvement of processes and data-driven decision making
- Exceed customer expectations



Key Technology & Library Highlights since 2021

- Upgraded network infrastructure in 2022
- Cybersecurity tools and practices deployed
- Continued commitment to quality customer service
- Student chromebook repair teams expand impact
- Brookfield Central, Brookfield Elementary and Burleigh Library Renovations
- 25% increase in book checkouts
- Increased family communication regarding book checkouts
- Expanded tools to monitor and report library traffic and database utilization

Teaching and Learning

Strategic Objectives:

- New learning technologies and digital resources are primarily identified through the curriculum adoption or continuous improvement processes.
- Student devices are provided for a stable, consistent, and accessible learning experience both in school and at home.
- Teaching responsible technology use through digital citizenship is an organizational responsibility.
- Our classroom technologies should reflect similar tools and experiences that students will encounter in college and career.

Anytime, Anywhere Learning

All student applications are available 24x7 on their chromebook, provisioned as web-based applications or through a virtual desktop interface. This provides great flexibility to students and staff as they determine their best time and location to learn and work. All students and staff have access to the Google Suite of productivity applications, and, depending upon the student's grade, the communications tools as well. Single sign-on capabilities help make sure application access is seamless, and that helpdesk issues related to logins are minimized.

Additionally, the District provides a wide range of library resources in digital format, including the Library Catalog which encompasses each school's print collection, and Sora, the District's eBook and digital resource platform. Age appropriate books are segmented into elementary, middle and high school collections.

Curriculum Integration

The District has a robust, 18-month curriculum renewal process and each curricular area is reviewed every five to seven years. There are many stages to this process, which includes the consideration of new student and staff technologies, software changes, and supplemental library resources. As one would expect, the technology requirements identified vary greatly, from elementary reading curriculum to advanced placement computer programming software. These needs are then evaluated by teachers and technology staff to determine viability and assessed for effectiveness, cost and impact. Additional software and hardware upgrades are considered using the technology adoption process, which includes a scan of our current environment, availability of resources, and long-term impact of any upgrade or addition to our computing environment.

Digital Citizenship and Information Literacy

The District has developed a Digital Citizenship curriculum for all levels based on national standards and incorporating quality resources from organizations such as Common Sense

Media. Additionally, information literacy standards are embedded in the curriculum of several core subject areas (e.g. English Language Arts, Social Studies). Students can expect to receive instruction from both classroom teachers and library staff, as they build high-quality research skills and capacity as digital citizens. Curriculum is reviewed periodically and, if necessary, refreshed to ensure that our students are equipped with the necessary technology literacy skills and library resources to support learning.

Learning Management System

Teachers provide digital course content and information via a standard learning management system at both elementary (Google Classroom) and middle/high school (Canvas). Providing a common platform offers students and families a consistent tool for course information and content. In addition, middle and high school students are exposed to a learning platform that is used by many colleges and universities, equipping them with valuable college-readiness skills.

Application of Learning

When possible, students are given an opportunity to apply their learning towards meaningful projects, situations or work experiences. For example, our LAUNCH program offers partner-sponsored projects for data science students to apply their analytical and technical skills while solving real-world problems.

In 2019, Elmbrook created Chromebook repair teams at each High School. The repair teams align with our mentorship program and are supported by our library and technology staff members. Students are trained on customer service skills, help desk ticketing, and how to perform Chromebook repairs. Overall, this support model has reduced the time to repair a device by over a week. In addition, students have earned 120 credits towards graduation, some have been hired as summer interns with the district, and others have successfully gained employment through local service providers. This continues to be a positive way to engage students who are interested in careers in technology.

Artificial Intelligence

The field of Artificial Intelligence is growing rapidly and its reach in education is broadening. From notetaking translation to data analysis to use in solving complex problems, AI has the potential to alter many core processes in education. The U.S. Department of Education has published a summary report of AI's current and projected impact on education, and the District will continue to use research and recommendations to inform next steps.

Classroom Learning Spaces

For many years, District standards have guided technology deployment and upgrades in our classrooms. Dedicated access points, teacher laptops, and interactive displays are standard in the 400 classrooms across the District. While most classroom technology is seamless and requires little training or explanation, the District is in the middle of replacing all SMARTBoards

and projectors with interactive displays. The core functionality of these devices is easily integrated into the classroom learning experience, but there are more features that can be shared with staff and students to deepen integration. Similarly, classrooms equipped with dedicated computer labs for advanced applications and computer aided manufacturing technology, provide an opportunity for additional and ongoing staff training.

Large Learning Spaces

As students and staff change the way they work, the District has evolved its approach to large learning spaces and the redesign of those spaces. In many cases, the library serves as the hub of the school, and renovations to those spaces have inspired change and innovation throughout our schools. Over the past seven years we have developed a standard approach to learning space redesign that is summarized here. This key process incorporates stakeholder input, site visits, architect and construction collaboration, and prioritization of resources. Library traffic data in all spaces helps assess the impact of the renovation and the continued utilization of our key large group spaces.

Library Redesign Timeline

- 2015 - Tonawanda Library
- 2018 - Pilgrim Park and Wisconsin Hills Libraries
- 2021 - Brookfield East Library
- 2022 - Brookfield Central and Brookfield Elementary Libraries (completed space)
- 2023 - Burleigh Elementary Library
- 2025 - (Projected) Swanson Elementary Library
- 2027 - (Projected) Dixon Elementary Library

Key Priorities for 2024-25

- ☑ Comprehensive review of Digital Citizenship Curriculum
- ☑ Facilitate learning on Artificial Intelligence (AI best practices for staff and students)
- ☑ Consider AI's impact on District Policies
- ☑ Develop plan for Swanson Library Remodel

2025-26

- ☐ Continue to expand the use of course management tools to increase engagement
- ☐ Establish guidelines and guardrails regarding Data Security and Use of AI
- ☐ Expand resources and opportunities for staff learning about classroom technologies and applications

2026-27

- Develop plan for Dixon and Swanson Library renovations
- Train 200 Staff Members on Building Human Agency in AI
- Expand AI Literacy training opportunities

Stakeholder Engagement

Strategic Objectives

- Provide formal and informal learning opportunities for Elmbrook staff
- Develop policies to focus and guide appropriate technology and library resource use
- Offer tools and provide education to families on technology and library engagement
- Leverage key partnerships to extend resources and inform best practices

Professional Learning

Professional learning encompasses the formal and informal opportunities to advance one's knowledge and apply it to one's work focus. While some complex applications require training before use, other applications may rely on self-help tools and internet searches for assistance. There is an opportunity for the District to develop more professional resources for staff on key applications used in the office and the classroom.

All District staff are required to complete annual training in computer security such as password management, information security and email phishing. In addition, the technology department provides monthly training opportunities that cover a variety of topics related to cyber security. This is further supported by monthly phishing campaigns that allow staff to apply their knowledge to common phishing attacks.

Development of Library and Technology Staff

The continued development of our technology and library team members is important to remain current with the latest tools, skills and applications. Professional development is provided through:

- Weekly department meetings
- Professional learning days
- Time to pursue industry certifications
- Conference attendance
- District-provided college coursework

District Policies

In addition to policies guiding purchasing, communication, and curriculum renewal, several district policies are designed to comply with state and federal expectations, and inform technology and library decisions, processes and practices.

- Student Appropriate Use of Technology (6177) - commitments to training students, use guidelines, non-district technology, and consequences
- Children's Internet Protection Act (6177.1) - federal law requirement to filter content
- Assistive Technology (6171.2) - procurement process to support identified needs

- Staff Appropriate Use of Technology (4511) - commitments to training students, use guidelines, non-district technology, and consequences
- Library Policy (6163.1) - material acquisition, collection development and interlibrary loan processes
- Controversial Issues and Materials (6144) - right to object to instructional materials, process to question the appropriateness of instructional or library materials
- Student Records (5125) - access to and protection of student records, which includes technology and library records

Family Engagement

Families play an important role in the development of their student's use of technology and library resources. The District provides several tools, practices and communication in order to create a strong school-family partnership in this work.

Technology Tools
Several smartphone applications are provided to keep families informed and connected including; Bus Tracking, Student Information, and Student Device Management at Home - provided by Securly. This application allows families to monitor internet usage at school or at home, and direct or limit internet use while it is used outside the physical school environment. More information about Securly's functionality can be found here.

Any middle/high school family member can sign up to be an observer in Canvas to follow course expectations and weekly learning plans. Families can also access the District's publicly-accessible library catalog database to review the print collection at any time. Finally, family members are encouraged to use their child's unique login information to review book availability and checkouts in the District's print and ebook collections.

Communication Tools

- Elementary families receive an annual communication from their classroom teacher outlining the purpose of technology for their grade/classroom and technology use expectations.
- Families receive weekly communication from their associated school(s) and district.
- Families in middle/high school can sign up for text alerts regarding grades and absences.
- Families receive just-in-time messages and reminders from the school or district, and can also opt in to receive text messages.
- Families whose children are high school juniors and younger, receive a weekly library book checkout report.
- All book purchases are posted annually to the library website.

Community Partnerships

The District intentionally develops key partnerships with vendors and organizations who enhance student and staff opportunities, extend district resources, and realize mutually

beneficial outcomes. Regular review of programs and services with our partners helps ensure the District's technology is current and relevant. Key partners include:

Technology

- Elmbrook Education Foundation: Elmbrook Connects, STEAM Event
- City of Brookfield: Off-lease devices, Fiber network
- Waukesha Education Community Area Network: Network connectivity
- Waukesha County Technology College: Network connectivity, Co-location services
- Wisconsin Educational Technology Leadership: Professional development, Statewide leadership development

Library

- Brookfield and Elm Grove Public Libraries: services, literacy and reading opportunities, programming, best practices
- Boswell Books: book reviews and recommendations, author visits
- Waukesha Bridges System: extends district resources, Kids Choice Awards
- Elmbrook Parent Network and PTO's: All-District Book Reads
- University of Wisconsin - Milwaukee: staff development and pipeline of future librarians
- OverDrive: inform product development and reporting
- Wisconsin Educational Media and Technology Association: Professional learning, leadership, collaboration

Key Priorities for 2024-25

- ☑ Expand professional learning opportunities for District applications and classroom displays
- ☑ Adopt a data privacy agreement with data vendors
- ☑ Curate library resources to support and expand the new ELA curriculum
- ☑ Perform collection maintenance with a focus on weeding materials
- ☑ Expand summer library program engagement opportunities

2025-26

- ☐ Review/revise Technology Policy

2026-27

- Evaluate web filtering/student safety solution with stakeholder input
- Develop family education resources regarding District's approach to AI
- Refresh Library District Policy and Develop AI Policy/Guidelines

Financial and Human Resources

Strategic Objectives

- Align technology and library expenses to the strategic priorities of the District
- Allocate human resources based on prioritized needs
- Build sustainability and redundancy in both the financial and human resources plans

Budget Overview

Because of different funding sources and purchasing requirements, they are profiled separately below. The **Technology Budget** (District Fund 10 Budget & Capital Maintenance) which is administered by the Director of Technology includes:

- Infrastructure: Servers, storage, backups in support of resiliency along with supporting connectivity needs such as updates to wireless, wired networks and firewall technologies
- Software/Software Maintenance: Examples include; Administrative (Infinite Campus), Cybersecurity subscriptions and services, and key application licensing (Adobe, Microsoft), and information archival services
- Connectivity: Annual internet costs, fiber maintenance, regional network membership
- Warranty/Support: Printing software, consulting, hardware maintenance agreements
- Technology Supplies: Chromebook repair parts, cabling, general parts associated with maintaining a technology program
- Device Replacement: Supports replacement cycles of teacher devices, student devices, computer labs, office devices, classroom technologies
- Department Needs: Training, travel, expert consulting services

A large percentage of the technology budget is dedicated to the replacement life-cycles of devices. Similar to the District's 10-year capital plan, declaring the replacement cycles provides predictable refreshes of hardware and, more importantly, the smoothing of budget needs from year-to-year.

- Student Chromebooks - 4 years
- Staff Devices (Windows/Chromebooks) - 4 years
- Classroom computers - 4 years
- Classroom displays - 8 years
- Network equipment - 5 years
- Storage and servers - 6 years
- Phones - 8 years

The **Library Budget** is funded from State of Wisconsin Common School Fund Library Aid dollars and is administered by the Director of Library Services. There are tight restrictions in the use of these dollars. Sample purchases include:

- Library books (digital and print)
- Instructional materials for school libraries, including research databases
- School library hardware and library administration software

Efficiency and Cost Savings

To make the most of limited resources, several technology-related efficiency and cost savings strategies have emerged over the years. The technology department prides itself on being a fiscally responsible department that takes a practical approach to technology needs and aligns its expenditures with the needs of the district.

- E-rate: Annually the district takes advantage of Federal E-rate funding to support eligible projects.
- Bidding/Contracts: The district engages in competitive bidding and/or the purchase of hardware and software on contract pricing (State, CESA, SourceWell etc.)
- Student Technology Team: In addition to providing students with the opportunity to gain real-world experience, the Student Technology Team saves the District over $100,000 in warranty repair expenses each year.
- Student workers - each summer, and occasionally during the school year, the Technology team utilizes paid student workers to prepare for the school year, install new technology and refresh devices.
- Off-lease Classroom Computers: In many cases, the District is able to purchase off-lease computers to meet classroom needs while providing at minimum a 4-year solution consistent with our replacement cycle.

Human Resources

Both the technology and library teams consist of talented individuals who provide world class customer service to students and staff.

The award-winning technology team is made up of repair technicians, and help desk, network and leadership personnel. Over time, their roles have evolved with new technologies, the changing needs of the District, and team members' varied skills and talents. The team responds to approximately 3,500 service tickets each year, closing 85% of them within three business days, often sooner. The student repair team extends the capabilities of our staff, and also gives technology team members the opportunity to mentor and develop the next generation of technology workers.

The Library team has three full-time librarians that oversee the library program, and library leads (assistants) at each of our nine schools. In addition to managing circulation and the curation of resources, the library team instructs students on information literacy, partners with teachers on classroom projects, manages chromebook repairs and troubleshooting, and cares for several new and innovative library spaces. Parent and student volunteers play an important role in our library operations, allowing for a higher level of service to our community of learners.

Key Priorities for 2024-25

- ☑ Align Technology staff skills and responsibilities with emerging cybersecurity and artificial intelligence needs
- ☑ Secure capital maintenance resources for storage/server upgrade
- ☑ Develop common school fund aid strategies in support of library renovation
- ☑ Perform impact analysis of library tools and applications

2025-26

2026-27

- ☐ Improve technology teams cybersecurity skills with training based on roles and responsibilities
- ☐ Leverage reporting tools for school and district printing to reduce printing across the District

Robust, Flexible Infrastructure

Strategic Objectives

- Design network and security based on industry best practices
- Provide a stable computing experience for all stakeholders
- Build capacity to support all education and operational technology needs
- Design to accommodate future growth

Fiber Network

In 2015, the district partnered with the City of Brookfield and Waukesha County Technical College to deploy a $2.1 million fiber network that offers the district expandable and unlimited data access to the Internet. The fiber network supports connectivity for all district school buildings and the district office. This agreement is part of a 20-year lease (IRU) that will end in 2035.

Internal Connections

Elmbrook maintains a wireless and wired network to support both key operational and learning functions of the environment. Each classroom is equipped with a wireless access point to ensure high performance wireless connectivity in support of both district-issued and personal devices. In 2021, the District invested $600,000 in a network hardware refresh and has now planned for a refresh every five years in its Capital Maintenance Plan. The 2021 refresh included over 600 access points, 115 network switches, and a robust network management suite, all designed to support 10,000 devices across the District. This equipment is scheduled for replacement every 5-years to maintain performance, security and to keep pace with the latest technological standards.

1:1 and Access

Staff and students (grades 2-12) are provided access to a high quality computing device throughout their academic career in Elmbrook. Providing access to a district-owned device ensures that all students are able to access digital learning opportunities on and off the school network. In addition to resource access, district-owned computing devices allow the district to deploy standardized testing in an efficient manner. District-issued devices are replaced every 4 years to ensure staff and students have access to a modern computing device.

Additionally, to ensure that all students have internet access at home, support systems are in place to identify families who require internet access at home and provide options that best meet their needs.

Web Filtering

Elmbrook deploys a web filter in support of several district policies. The filter is available on all district computers, regardless of whether the devices are on or off the district network. In

accordance with the Children's Internet Protection Act and Board Policy 6177.1, the District utilizes an internet filter to direct student and staff use of the Internet. While the internet filter can guide a staff member's appropriate use of technology resources, at no time can staff members use technology resources to use, access, store or transmit inappropriate content.

Responsive Support

In collaboration with the library team, the technology team aims to provide high quality responsive technical support. The library is the technical hub of each building where students are able to access support to maintain their district-issued computing device. In addition, staff can easily access technology support through a district maintained helpdesk system. Evaluation of technology needs and initiatives are reviewed with key partners annually to make sure solutions are relevant and impactful.

Business Continuity

Technology and resource access is an essential component to the business and learning functions of the district. With that in mind, it is important to ensure that our technical systems are available when needed. Data is protected and stored using best practice strategies to ensure data integrity. Our partnership with Waukesha County Technical College allows us to host Elmbrook equipment in their data center to create redundancy of basic system functionality until primary equipment can be restored.

Additionally, key systems are available in the cloud to ensure anywhere, anytime access. This includes security access to those systems to create a seamless single sign-on experience for staff and students.

Secure

In order to create a secure computing environment the district aligns with cybersecurity standards in regards to system access, environment hardening, network credentials and device hardening. These efforts are continuous and have become integrated into our daily operations. Partnership with a 24/7 cybersecurity provider provides around-the-clock monitoring of our environment and staff are provided training on a monthly basis.

Key Priorities for 2024-25

- ☑ Deploy a tested business continuity plan that ensures cross training of technical staff
- ☑ Deploy a system status solution to inform of technology related issues and outages
- ☑ Testing of Cybersecurity Response Plan

2025-26

- ☑ Modernize Windows Laptop and desktop fleet to address Microsoft Windows 10 EOL

2026-27

- Evaluate and replace wireless and wired connectivity as part of the replacement lifecycle