



ALEXANDRIA
Public Schools

Rich tradition. Bright future.

Alexandria Public Schools

2021-2025 Technology Plan

Personal ~ Comprehensive ~ Responsive

June 1, 2021

TABLE OF CONTENTS

Background & Purpose	2
Background	3
Purpose	3
2021-25 Technology Planning Process	4
Alexandria Public Schools Technology Vision	5
Stakeholders	5
Technology Interviews & Surveys	5
Technology Assessments	5
Celebrations & Accomplishments 2019-2021	5
Alexandria Public Schools Technology Needs Assessment	7
Staff Technology Survey	12
Technology Internal SWOT Analysis	13
Fall Building Assessment Data	13
Mission & Focus Areas for Technology	14
Evaluation Plan	17
Policies and Procedures	18

Background & Purpose

Background

Alexandria Public Schools have served the Alexandria community since 1880.

The District covers a wide geographic area (341.5 square miles) which include the communities of Alexandria, Carlos, Forada, Garfield, Holmes City, Miltona, Nelson, and surrounding townships.

The District's educational locations that serve approximately 4200 students consist of:

- ✓ One Early Education Center
- ✓ Six Elementary Schools (K-5)
- ✓ One Middle School (6-8)
- ✓ One High School (10-12)
- ✓ One Alternative Learning Center
- ✓ Adult Basic Education Center

As of April 1, 2021, The District also has several off site locations on their network including:

- ✓ Gymnastics Center
- ✓ Hockey Arena
- ✓ County Gym Facilities
- ✓ Youth Recreation/Sliding Facility (Shenanigans)
- ✓ Transportation Offices (Fairgrounds)
- ✓ Food Services Offices
- ✓ Transportation Shop

Additionally, Alexandria Schools through their CMETS partnership provides several services to member districts including Internet, Video, Phones, and Wireless for the following school districts:

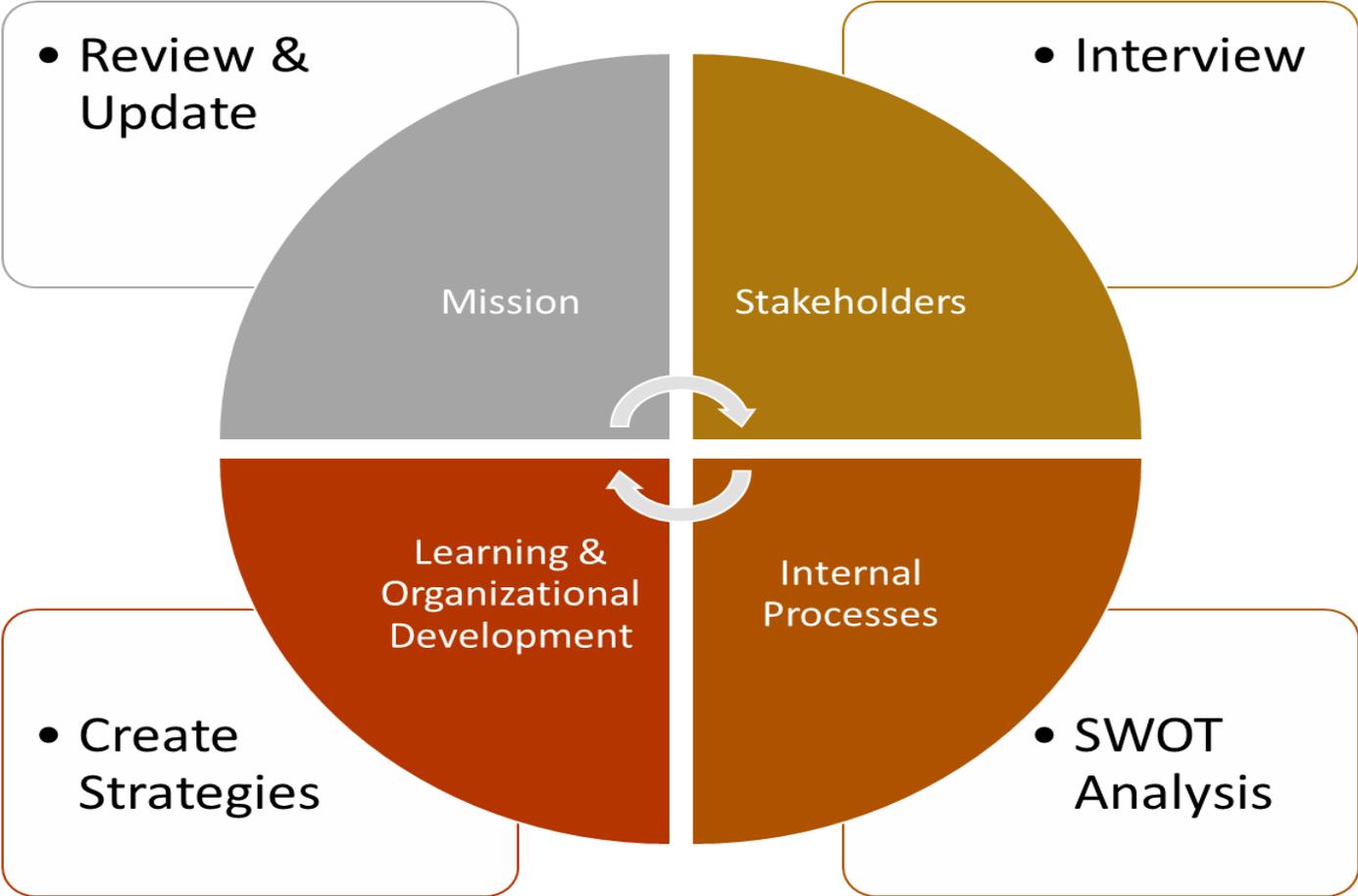
- ✓ Albany Public Schools
- ✓ Sauk Centre Public Schools
- ✓ Brandon/Evansville Public Schools
- ✓ Parkers Prairie Public Schools
- ✓ Melrose Public Schools
- ✓ Osakis Public Schools
- ✓ Minnewaska Public Schools
- ✓ West Central Education District
- ✓ Runestone Area Education District

Purpose

The purpose of this document is to define Alexandria Public Schools Technology Plan covering the school years 2021-2025.

Alexandria Public Schools

2021-25 Technology Planning Process



Alexandria Public Schools Technology Vision

*To Empower Students, Staff, & Community Members
Utilizing Technology to Ignite a Passion for Lifelong Learning*

Stakeholders

1. Board of Education
2. District Administration
3. District Technology Committee
4. Technology Team Members
5. Vendor Partners
6. Students
7. Teachers & Staff
8. Families & Community Partners

Technology Interviews & Surveys

As part of the Technology Strategic Planning process, key stakeholders were interviewed through the use of various mechanisms including:

1. Alexandria Public Schools District Technology Committee
2. Alexandria Public Schools Staff Technology Survey
3. Alexandria Public Schools Genius Team Students

Technology Assessments

End to End assessments of current deployed technology platforms was performed to provide further input to the stakeholders including:

1. District Technology Team - Building Assessments & Staff Surveys
2. Marco (External Vendor) - Data Center Assessment
3. Seven Sigma (External Vendor) - Network and Infrastructure Assessment

Celebrations & Accomplishments 2019-2021

- All district phones upgraded
- Alexa pilot (Including Alexa clocks)
- Introduction of Zspace into our schools
- Building additions/upgrades
 - Miltoona additions
 - Discovery Media Center
 - Woodland Media Center
 - Garfield Media Center
- Launched new student and staff Portals through Classlink
- SeeSaw learning management system addition in elementary
- KG added to 1:1 initiative
- Introduced chromebook summer use program
- Access points swapped at AAHS & Discovery & Garfield & Carlos
- Addition of several buildings to the network
 - ABE tech college
 - Spirit building
 - County gym
 - Fairgrounds breakroom
 - Hockey arena
 - Klothes Kloset
- Security system additions
 - Soft lockdown buttons
 - External strobes
 - Additional cameras
- Added computer science curriculum and networking at AAHS
- Expanded web presence
- Expanded YouTube presence
- Launched additional teacher communication tools so that teachers can text parents
- Launched Raptor emergency/visitor management
- The network performed well during the COVID work from home and distance learning phases
- Introduced NetRef teacher/classroom management tool
- Implemented Synergy analytics
- Implemented online conference scheduling
- Consolidated software solutions and increased auto provisioning
- Introduced Screencastify for screen recording
- Upgraded sound systems in PAC
- Enhanced gyms for live streaming of events
- Introduced Esports program at AAHS
- Created in town and out of town network rings to ensure stability and redundancy at all our schools
- Implemented a 10 GB network at all our schools

Alexandria Public Schools Technology Needs Assessment

Alexandria Public Schools has engaged their vendor partners including Cisco, Marco, & Gardonville/7 Sigma as well as their Technology Committee and Technology staff to do a comprehensive review of technology deployed and future technology desired.

Through this process the following technology needs have been identified:

1. Information Systems/Learning Management Systems

- While Synergy, our Student Information System (SIS), has served our district well for over 10 years, it may be time to do a formal SIS review to ensure Alexandria Schools is well suited for the next 10-12 years.
- Continue migration to one back office/business office set of solutions to provide further efficiencies as well as provide employees with more self service access.
- Formation of a subgroup of the Technology Committee to formally review Schoology/Seesaw/Google Classroom along with other Learning Management Systems to ensure Alexandria Schools is well positioned for the next 10 years

2. Cyber Security

- Further enhance Alexandria Public Schools cyber security posture with staff awareness training and periodic testing
- Conduct an annual cyber security assessment

3. 1:1 Student and Staff Devices

- Ensure 1:1 devices are kept relevant by expanding to three annual student chromebook injection points (approximately 1000 devices per year)
- All 1:1 devices going forward should be touch screen devices
- For elementary students, understand if there is a need to also procure peripherals for the chromebooks (headphones, mice, etc.)

- Understanding that sometimes one size does not fit all:
 - Complete a review of staff devices to ensure staff have the correct device they need to support their position and/or curriculum
 - Review the screen size on staff devices to determine if staff should have a slightly larger screen and/or two screens at teacher stations
 - Review needs of support staff

4. Renewal:

- Continue to research cost effective device retirement/replacement/renewal strategies that continue to provide students and staff relevant technology
- Take a deep dive into iPads at the Elementary level and determine if the current functionality is supported on the 1:1 chromebook devices
- Continue to maximize the utilization of federal e-rate funding to renew/refresh the overall network infrastructure
- Ensure Building and Classroom Technologies continue to stay refreshed and relevant
- Complete a Printer Refresh across the district including movement towards Print/Release for all staff (ensure staff have quick print options on workroom copiers)
- Movement to a virtual fax platform
- Partner with AAHS to renew TV Studio technologies in alignment with production curriculum as well as live streaming needs
- Partner with AAHS and the community to further enhance the PAC technologies exploring both audio and video enhancements
- Alexandria Public Schools Smartboard Lease will be due in 2022. A replacement or buyout plan will be necessary as well as budgeting for Smart Software

5. Systems/Cloud (Data Center 3.0):

- Prior to replacing any current Data Center Infrastructure - consider further minimizing the on-site data center presence by exploring Microsoft Azure and Amazon offerings
- Update Core Switching to allow movement to a MGIG network in support of faster throughput at that access points
- Evaluate if 10 GB is the correct network speed between buildings and the internet
- Several solutions are nearing end of life and a replacement plan needs to be considered including:
 - Cisco USC (Server Infrastructure)
 - Nimble SAN
 - Camera System Hardware
 - District Core Switching
- Consider consolidating VMWare licensing
- Data Backups - Consider removing hardware from core network
- Consider a What's up Gold Audit to maximize monitoring and alerting infrastructure
- With the expansion of internet based compute devices at Alexandria Public Schools and the desire to have systems available at home or at school, all new solutions should be:
 - Web/cloud based ensuring seamless access at home or at school
 - Able to authenticate with Active Directory or Google Directory so users have one set of sign on credentials
 - Loosely coupled and tightly integrated to minimize the need for double entry
 - Cost effective and sustainable beyond year 1 pricing

6. Wifi/Internet Access:

- Alexandria Public Schools needs to proceed with a planful replacement of Access Points and Devices to support the next generation of Wifi (Wifi 6.0)

- All new device purchases should be Wifi 6.0 compatible
- Alexandria Public Schools must ensure redundancy is in place across the system to help ensure greater than 99.5% Wifi and internet uptime

7. Network:

- A critical component to Wifi and Internet access is the core network infrastructure
- While Alexandria Public Schools has a very robust/reliant network, there are certain network appliances that may soon become a bottleneck with the introduction of Wifi 6.0 and/or are nearing their end of life
- It is recommended that Alexandria Public Schools continue to adopt a NSPOF (No Single Point of Failure) methodology in their network and data center design
- Continue to investigate DDOS Mitigation and Prevention and Traffic inspection services

8. Technology Programming/Curriculum

- Partner with Teaching and Learning to ensure Digital Citizenship is embedded at all levels of education
- Fully Implement Keyboarding Programming at the Elementary and Middle School levels
- Continue to Partner with Teaching and Learning in support of computer science & Technology curriculum needs (network labs, etc.)
- Further research the role of "Screen Time" in younger elementary students
- Research tools to provide parents more control of what their children are doing on their school issued devices while they are at home
- Work with Discovery Middle School and the Activities Department to expand the Esports program to Discovery Middle School

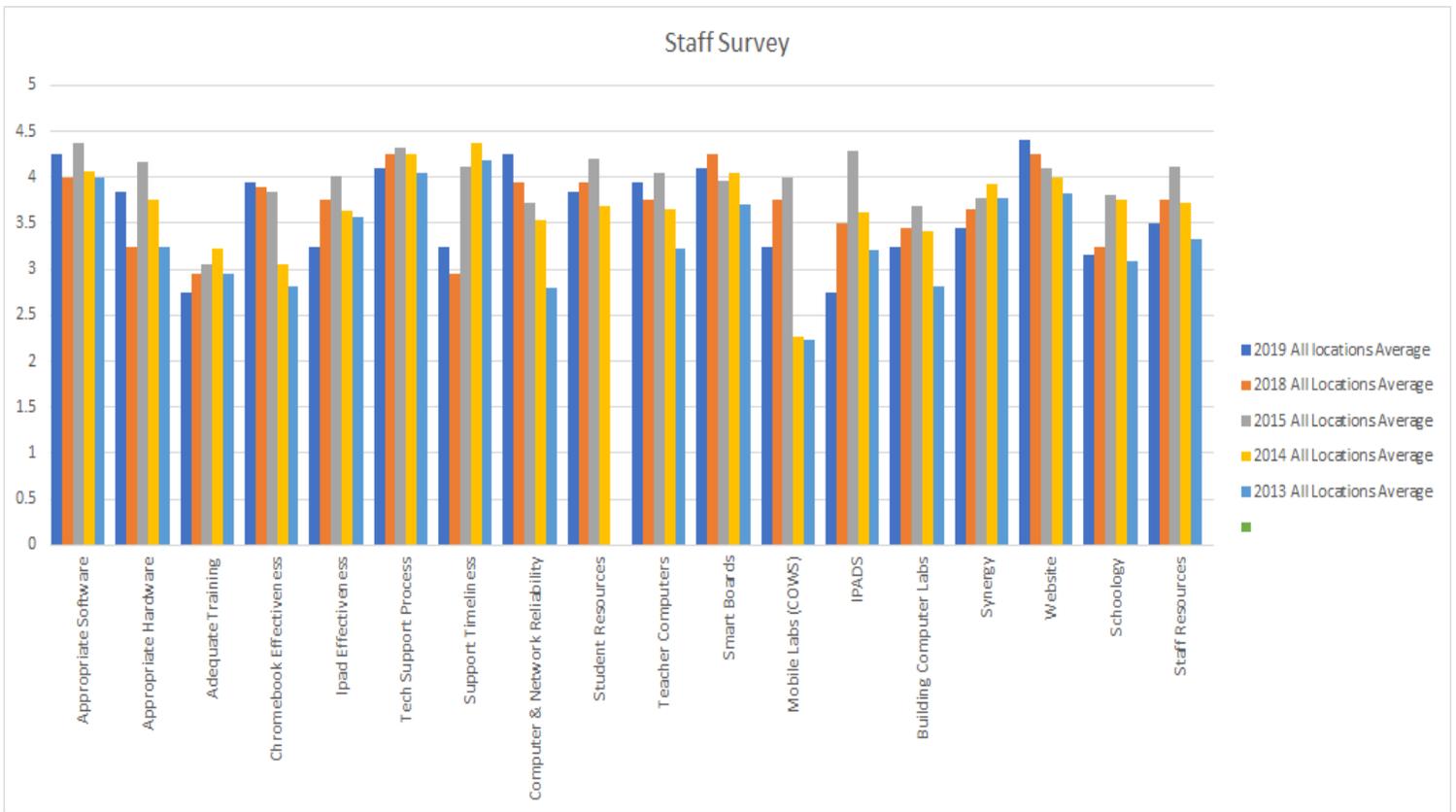
9. Practices:

- Partner with teaching and learning to ensure technology integration occurs throughout the day at our elementary schools
- Evolve Alexandria Public Schools website to provide more information with less clicks
- Ensure a common set of Parent Communication Tools is used Pre-K through 12
- Expand usage of Student/Staff RFID cards district wide
- Creation of a SIS sub committee from the District Technology Committee to ensure we are maximizing our investment and potentials with our Student Information System.
- Further enhance Single Sign on for Parents
- Further enhance Live Stream platforms that parents and our community members have become accustomed to
- Enhanced Data Warehouse/Data Analytics solution

10. Classroom Technologies

- With SmartTV's nearing five years old, consider what's next
- With High School Classroom Technologies six years old consider a rolling update/upgrade
 - Room Audio & Video Systems will need a digital upgrade
 - Teacher Stations may need to be revisited to support the next generation of High School Classrooms
- Review the role of the Document Camera in the classroom and determine "what's next"

Staff Technology Survey



Each year Alexandria Public Schools surveys their staff on their perception of technology within the district. (Note: Due to COVID - the survey was not completed in 2020) The survey is done on a 1-5 scale whereas 5 is the best and 1 is the lowest.

Several key indicators have been noticed:

- Staff really like the Smart Boards
- As Chromebook effectiveness has increased, iPad effectiveness has decreased
- Staff Training continues to be lower than we would like.
- Staff continue to report they are being provided appropriate hardware
- At the time of the last survey, we did not have a dedicated support person for our GMC schools.

Technology Internal SWOT Analysis

A. Fall Building Assessment Data

Alexandria Public Schools - Fall 2020 - Building Level Technology Assessment																
Assesment Area	AAHS	Discovery	Carlos	Mitona	Garfield	Lincoln	Voyager	Woodland	EEC	District Offices	Food Service	Transportation	ABE-Alexandria	Gymnastics	County Building	RAED - North
All Jacks Are Labeled	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No Personal Switches	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Labs Properly Wired	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	n/a	n/a	Yes	n/a	n/a	Yes
Data Closet Secure	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	n/a	Yes	Yes	Yes	No
Data Closet Wiring OK	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	n/a	n/a	Yes	Yes	Yes	Yes
Classroom Wiring OK	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	n/a	n/a	Yes	Yes	Yes	Yes
Avg. Age of Switching (Years)	2	2.5	1	6.5	1	7	6	3	3	3	7	5	8	6	6	8
District VOIP Phone System	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Exterior Security Cameras	Yes/	Yes/	Yes/	Yes/	Yes/	Yes/	Yes/	Yes/	Yes/	Yes/	Yes	Yes	No	Yes	Yes	Yes
Interior Security Cameras	Yes/	Yes/	Yes/	Yes/	Yes/	Yes/	Yes/	Yes/	Yes/	Yes/	Yes	Yes	No	Yes	Yes	Yes
Electronic Access Control System? (Scan Cards)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
District Digital Signage System Indoors	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	No
Digital Signage Outdoors	Yes	No	No	No	No	No	No	No	No	No	No	No	No			No
Electronic Physical Cash Drawer in Cafeteria	Yes	Yes	No	No	No	No	No	No	No	No	n/a	n/a	n/a	n/a	n/a	n/a
Count of Physical Computer Labs	4	2	0	0	0	0	0	0	0	0	n/a	n/a	1	n/a	n/a	0
Count of Mobile Computer Labs	0	0	0	0	0	0	0	0	0	0	n/a	n/a	1	n/a	n/a	0
Count of Teacher Computers	180	74	8	8	8	40	32	33	8	0	n/a	n/a	2	n/a	n/a	4
Count of Staff Computers	40	21	8	8	8	8	18	20	18	24	n/a	n/a	2	n/a	n/a	7
Count of Student Macs	182	32	0	0	0	0	0	0	0	0	n/a	n/a	0	n/a	n/a	0
Count of Ipads	42	53	12	8	10	24	28	22	6	4	n/a	n/a	0	n/a	n/a	0
Count of Chromebooks	1400	1050	120	120	120	480	510	492	6	32	n/a	n/a	0	n/a	n/a	120
Students/Device Ratio	1	1	1	1	1	1	1	1	na	na	n/a	n/a	na	n/a	n/a	1
Count of Document Cameras	68	54	5	5	5	24	16	22	4	1	n/a	n/a	0	n/a	n/a	0
Count of Smart Boards	23	32	6	6	6	24	28	25	6	1	n/a	n/a	1	n/a	n/a	4
Count of Wireless Access Points	148	86	12	12	14	34	38	44	8	5	2	1	1	5	4	5
On District Paging System/Bell System	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lockdown Button	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Count of Assigned Tech Support Staff	1	0.9	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.05	0.05	0.05	0.1	0.1	0.05

Each year the Technology Team does an internal assessment of each building ensuring all buildings have similar levels of technology. Significant strides have been made over the last several years especially in the security front.

Areas to consider for the future:

- Outdoor Digital Signage
- Rewiring Carlos Elementary School

Mission & Focus Areas for Technology

Alexandria Public Schools Mission for Technology:

We are
Personal ~ Comprehensive ~ Responsive

We believe consistent and progressive integration of technology is essential to ignite and transform learning

2021 - 2025 Technology Focus Areas:

- Area 1:** Technology at Alexandria Public Schools will energize and engage students' passion for lifelong learning.
- Partner with the High School to Integrate Technology classes into the curriculum such as Desktop Support, Computer Science, Programming
 - Partner with Teaching and Learning on Keyboarding and Digital Citizenship skills
 - Explore expanding Esports to the Middle School
 - Continue to improve the mobility, collaboration and security within the district
 - All new student based hardware should be touch screen whenever possible
 - Ensure students have the right device/tools to be successful in the classroom
 - Ensure robust internet filtering technologies in place
 - Use technology to support students' learning styles
 - Recognize that one technology does not fit all needs, be flexible
- Area 2:** Technology at Alexandria Public Schools will cultivate and engage excellence in teaching for all staff.
- Curriculum and technology will be closely integrated with standards

- Continue in allowing a progressive, consistent implementation of technology use District Wide that supports instructional curriculum at levels
- Building/Classroom Technologies shall remain current and relevant
 - Classroom Technologies shall remain on a rotation cycle
 - Perform a staff device review with the goal of ensuring all staff have appropriate devices to accommodate their job functions including screen sizes, multiple monitors, “Smart” Devices and computer platforms
 - Opportunities shall be brought up and discussed at the District Technology Committee quarterly meetings
 - Technology shall continue to reserve a portion of their budget to pilot “What’s Next”
- Data Privacy/Data Security training
 - Provide annual Data Privacy/Data Security training for staff
- Expanded online professional development opportunities

Area 3: Technology at Alexandria Public Schools will embrace family and community partnerships.

- Provide for a “Fast Family Friendly” platform of information through web, mobile, and other digital channels
- Provide for local organizations & businesses an avenue to partner with the district by tapping into technologies
- Update and enhance district media streaming equipment and services to ensure further outreach of Alexandria Public Schools programming and events
- Communicate with community who do not have children in the district through various technology channels
- Explore tools that may allow parents to review student usage of school issued devices at home

Area 4: Technology at Alexandria Public Schools will provide efficient and effective systems, service, and support.

- Continuation of the NSPOF (No Single Point of Failure) strategy
 - The network must be built to ensure Wifi/Internet Uptime exceeds 99.9% on a go forward basis
 - Move to Wifi 6.0
 - Enhance communication to staff surrounding technology goals and systems uptime
- Maximize the utilization of E-Rate funding to update and upgrade the overall core network to 10 GB and beyond
- Data Center 3.0
 - Replacement of aging data center hardware
 - Creation of overall strategy to further reduce data center footprint through cloud or sourced services such as Azure/Amazon Web Services
 - Implement backup isolation strategy
 - New Software and Solutions will be Cloud Based yet loosely coupled and tightly integrated to our current data systems
- Utilizing the Tech Committee, Perform a formal SIS & Elementary LMS review (Grades 2-3-4-5) to ensure Alexandria Public Schools is on the correct platforms for the next 10-12 years
- Wrap up Business Office migration to powerschool HR and Business Office Suite
- Maintain and expand the physical security technologies within the district
- With more devices to support, continue to evaluate Technology Staffing Model to ensure adequate coverage and response time
- Continue to support district growth and expansion through multiple expected construction and/or remodel efforts
- Continue to support the technology for Runestone Area Education District and Adult Basic Education as they adhere to Alexandria Public Schools technology standards and guidelines

Evaluation Plan

We will be coordinating our technology efforts with the continuous improvement planning process used District wide as established by the school board. Our overarching technology goals will be broken into yearly goals and action steps, complete with assignments of responsibility, participation, measures of success and timelines. This process includes:

1. Setting SMART goals (Specific, Measurable, Attainable, Realistic, Time bound) for each area of improvement in our Technology plan.
 - a. Action steps will be created annually that help us achieve our goals
 - b. Evaluation measures will be established for each goal and will be measured both district wide and at the site levels, based upon the intent of the action steps.
2. Goals must align with the overall district technology plan as well as the initiatives established by the School Board.
3. Annual staff development plans will be created that support the technology initiatives.
4. Annual surveys are conducted with identified staff, students and parents regarding the effectiveness of programming in our schools.
5. Additional data will be collected, as appropriate, to each goal and action step.
6. Progress on technology goals will be reported to the school board annually.

This process is driven by the Director of Technology, with collaboration from others in the technology department, the Director of Teaching and Learning, and the District Wide Technology Committee members. Staff development plans are created collaboratively with the staff development and BLT committees across the district, and are measured by the same. Information from the spring 2021 technology assessments will be used in planning for the next 3 years, and in the same way in measuring the success of our new plan.

Policies and Procedures

Policies are posted on our website for parents and staff access. Certain policies and procedures are also distributed in student handbooks and yearly calendar mailings. Policy 524 contains policy information regarding CIPA compliance.

The policy: 524 - ACCEPTABLE USE OF NETWORKED INFORMATION RESOURCES details district policy and/or administrative procedures.

[http://www.alexandria.k12.mn.us/cms/lib01/MN01000334/Centricity/ModuleInstance/1820/Policy_524 - Acceptable Use of Networked Information Reso.pdf](http://www.alexandria.k12.mn.us/cms/lib01/MN01000334/Centricity/ModuleInstance/1820/Policy_524_-_Acceptable_Use_of_Networked_Information_Reso.pdf)

Alexandria Public Schools annually notifies parents and guardians of the guidelines and policies governing student use of the district's computer network. Telecommunications, electronic information sources, and networked services significantly alter the information landscape for schools by opening classrooms to a broader array of resources.

Before students can access these resources, however, they must have parent/guardian permission and must be supervised by district staff. Students, using these network resources, must follow the same behavioral guidelines on-line as they do at all school activities. The district's Discipline Policy and other safety policies apply to online behavior.

Each school building will distribute additional information to parents that describes acceptable and unacceptable use of the computer network including the Internet User Agreement. Parents will be asked to sign this form when their child enters Kindergarten, seventh grade, tenth grade or when they are a new student to the district after kindergarten.

The policy 524 and the AUP is updated as deemed necessary.

Timeline:

Creation draft of technology Plan 06/01/2021

Revisions: