Mid-America Technology Center

Technology Plan

We challenge one another to live our lives, embrace our mission, and pursue our vision

Mid-America Technology Center
27438 State Highway 59
Wayne, Oklahoma 73095

Approved at the MATC Board Meeting
May 13, 2024

DISTRICT TECHNOLOGY PLANS
Minimum Preferred Components

1. The vision, mission, and funding description of the type of technologies, telecommunications, and other services (i.e., hardware, Internet access, wiring) to be acquired, including specific provisions for interoperability among components of such technologies, and to the extent practicable, with existing technologies. The projected cost of technologies to be acquired and related expenses needed to implement such plan including a demonstration of how the district will pay the after discount costs for the purpose of the Universal Service Fund.
   .....Pages 3-4
2. An explanation of how the acquired technologies will be integrated into the curriculum or library services to help enhance teaching, training, and student achievement. A description of the supporting resources such as services, software and print resources, which will be acquired to ensure successful and effective use of technologies acquired under this section. A list of the source or sources of ongoing training and technical assistance available to schools, teachers, and administrators such as state technology offices, institutions of higher education

   .....Pages 5-8
3. An explanation of how programs will be developed in collaboration with existing adult literacy services providers such as public libraries to maximize the use of such technologies. A description of how the LEA will coordinate all technology with other grant funds available for technology from state and local sources
   .....Page 9
4. A description of how the LEA will ensure ongoing, sustained professional development for teachers, administrators, and school library media personnel to further the use of technology in the classroom or library media center.
   .....Page 10
5. The projected timetable for implementing such plan in schools.
   .....Pages 11-12
6. A description of a continuous evaluation process which takes place at established intervals. The evaluation should focus on both internal and external institutional variables such as student performance, sources of ongoing funding, teacher proficiency in the use of technology, innovations in technology development, etc.
   .....Pages 13-14
7. Copies of the district student technology policy and Internet usage policy.
   .....Pages 15-36

VISION:

We have an exciting shared vision about the future of learning. Our vision comes from the desire to be all we can be.

Mid-America Technology Center is recognized for quality education, training, leadership and service, providing a climate where all stakeholders can experience success. Mid-America Technology Center is also recognized as a leader in economic development, providing an atmosphere where every individual is valued. We continue to stay on the leading edge of technology, innovation, and emerging workforce trends in order to maximize a return on investment.

MISSION:

Our mission describes the fundamental reason we exist and is the focal point of all our efforts.

Mid-America Technology Center enriches economic stability and growth by providing quality education and training.

Goals:

At Mid-America Technology Center, as our mission states we have set specific goals to provide educational and training opportunities for our students, citizens, and businesses in our communities.

Goal 1: Mid-America Technology Center will improve academic student achievement for all students by incorporating the use of technology to broaden the variety and presentation of materials using best practices. By incorporating up to date technology practices our students will better serve the citizens and businesses in our surrounding communities.

Goal 2: Mid-America Technology Center will provide professional development in technology for all staff in technology areas that will help each staff member upgrade their technology proficiency.

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Funding:

GENERAL INFORMATION:

Mid-America Technology Center serves 19 public schools over 8 counties with a number of students coming from private and home school environment. There are 32 daytime programs with 850-950 daytime students and 5,000 students in the nighttime classes. Mid-America has put together the infrastructure that consists of a fiber optic connection to OneNet with the speed of 3Gbps. Mid-America has a local area network (LAN) that consists of fiber backbone connecting 12 buildings and 900 Internet connected devices. Instructors are provided a laptop, giving them access to email, the Internet & enabling remote instruction.

The plan calls for the installation of the following components:

1) upgraded servers that are no longer meeting the needs of the campus for shared applications and files on the LAN;

2) upgraded networking equipment, wireless access points to support higher bandwidth applications;

3) upgraded printers that are no longer meeting the needs of students, staff and faculty;

4) upgraded computers that are no longer meeting the needs of students, staff and faculty

5) centralizing school apps and evaluating school processes to see if they can be improved by apps

6) a disaster recovery plan

7) updating and implementing an IT security plan

8) upgrading and standardizing Audio/Visual equipment on campus

TECHNOLOGY PLAN:

To help improve instructor's and teacher assistant's productivity we will implement necessary technology to allow grades to be automatically transferred from an officially supported learning management system (LMS) to the student information system (SIS).

All full-time students will be provided a school email address to help facilitate learning. The email account will grant the students access to online resources (from Microsoft, Adobe, Google, Apple, etc) that instructors can use in and out of the classroom.

Desktop, laptop and tablet computers that are no longer able to run current software reasonably will be replaced with new industry standards computers. An industry standards computers is defined as one that includes optimal hardware, peripherals and the latest available operating system. Exact specifications for the hardware, peripherals and operating system will be based on recommendations of the Mid-America IT staff. These industry standards computers will have a connection to the network and the Internet as needed, allowing an instructor to use them for student instruction.

Cyber security is very important in today's age. Security software such as anti-malware will be installed on all computers. Licensing for such software will be annually renewed, so that the latest definitions will be available. An intrusion detection/prevention system will be implemented and maintained for the purpose of detecting and stopping both internal and external network attacks. It is our intent to screen all emails for SPAM and Phishing attempts, and Internet access filtered for inappropriate and malicious sites. A two-factor authentication system will be put into place for the purpose of protecting student and employee information and computer systems. As new security threats come out, new software and hardware will be deployed to prevent downtime and data loss. A disaster recovery plan will be created including a secondary server room in a separate building and off-site backups.

The IT infrastructure will be updated by replacing servers or transitioning services to the cloud when the servers become outdated, with the replaced servers being repurposed for testing, instruction and for the disaster recovery plan. All new servers will be rack mount capable servers to make more efficient use of space. All new servers will be purchased based on recommendations of the Mid-America IT staff. All new interbuilding cable will be single mode fiber to allow 25Gbps connection between buildings and prepare us for future upgrades as new switching technologies becomes available. The campus wide wireless network will be upgraded as new wireless technologies come out.

Audio/Visual equipment will be upgraded to support the latest technologies. Video equipment will be upgraded to support digital inputs as well as analog inputs

School processes will be evaluated to determine if technology can be used to improve them by the purchase or development of applications. Any new applications will be required to undergo a security evaluation determined by the IT Director. Also, an attempt will be made for applications to support employees and students whose first language isn't English.

INTEGRATION:

With the benefit of added technology, the instructor will be able to enhance the curriculum by use of industry videos, which will depict live work situations. The people in industry will be able to interact with students who might be prospects for employment. With the use of the Internet, the instructor will be able to tap vast information resources from their training field, enhancing the curriculum. Students will, with the new technologies, have access in the media-center and their classrooms to career development information from other libraries. The instructor will be able to add certification testing to the class which will better prepare students for the job market.

Mid-America, which serves approximately 5000 students, offers a wide variety of short-term classes, many of which are information technology related. The adding of new emerging technology to the night programs will enhance the offering of the nighttime programs.

The Academic Resource Center is available to all the students. In the Academic Resource Center, students work on their technology skills such as computer operation and job readiness. The students produce a resume and a portfolio to assist them in job placement.

The Academic Resource Center is also used to enhance and supplement the instruction in the classroom. The Academic Resource Center uses a variety of programs and subject-specific software to enhance what they are learning in the classroom. The Academic Resource Center is used for remediation in math and reading.

SUPPORTING RESOURCES:

Supporting resources include but are not limited to classroom computers, servers, printers, network topology, networking devices, and software. All resources should be applicable to each classroom and fulfill the educational needs of every student in every classroom. Students need to be in the best learning atmosphere that we can feasibly offer.

Classroom computers should fulfill the learning requirements needed to obtain a job in today's society. Every classroom should have access to computers, and peripherals that are updated as necessary to accomplish the needs of the curriculum; this includes updated software and the operating system.

Servers should be kept updated with hardware and software and be able to handle the traffic involved. Software and computers should be kept updated such that all capabilities can be exploited by the faculty.

The network should have good performance, availability, and scalability by constantly evaluating the bandwidth available with the current throughput. Considerations of throughput should be: internetworking devices used, types of data transferred, network topology, number of users, user computers, server computers, power conditions, and network congestion. As our throughput needs increases we will upgrade our network infrastructure to allow greater bandwidth, and consider a higher capacity connection to the internet.

We need to train faculty to operate the software that we have. Faculty members that need be trained on simple computer usage such as subdirectories, file management, etc. will be offered classes in such areas. Also classes will be offered on software to allow better utilization. All employees will receive training on how to operate technology resources securely to protect the school's data and network.

Finally, administration needs to be able to track the training that faculty has had and any training that the faculty or administration decides would be helpful in the teacher's performance.

PROFESSIONAL DEVELOPMENT TRAINING:

As Mid-America advances in technology, we clearly see the importance of providing training to the faculty, staff, and administration who will be utilizing the technologies. Personnel will be encouraged to participate in training on site and/or at qualified training sites throughout the nation.

An organized in-service training program for the faculty was established at the school's inception and more of the in-service training is becoming technology related. On-site training for instructors, staff, and administration will be available through courses developed and delivered internally by qualified instructors, who will attend authorized training facilities to equip them for specific applications.

In addition, the Oklahoma Department of Career and Technology Education offers workshops and conferences for on-going training. Several universities offer training and college credit courses through videoconferencing. Corporations often offer training relevant to specific applications. Additional training opportunities are available to the faculty and staff at no charge through our evening programs and short-term classes.

Mid-America is committed to keeping our faculty, staff, and administration adequately trained to utilize our latest technology. Personnel are encouraged to stay up to date of the newest available technology and become educated about those things which will benefit our purpose and improve our educational process.

Strategic Technology Roadmap

Ongoing Annual IT Operations

- Replace end-of-life computing devices
- Review and adjust software licensing and application portfolio
- Evaluate servers for upgrade, replacement, or cloud transition
- Assess network and security infrastructure lifecycle
- Maintain and rationalize campus printing environment
- Identify process improvements through automation and applications
- Review IT staffing needs and organizational alignment
- Test and refine Disaster Recovery and Business Continuity plans

Strategic Roadmap

2026-2027:

- Begin IT Security Plan: Implementation Group 1
- Continue phased migration to cloud services
- Begin network backbone upgrade (target: 25Gbps core)
- Replace aging wireless infrastructure

2027-2028:

- Complete IT Security Plan: Implementation Group 1
- Finish phased migration to cloud services
- Begin print environment optimization (targeted color printer reduction)

2028-2029:

- Setup a SEIM/SOAR
- Replace aging wireless infrastructure
- Develop data governance framewor

2029-2030:

- Begin IT Security Plan: Implementation Group 2
- Implement an internal AI system for sensitive AI operations

2030-2031:

- Complete IT Security Plan: Implementation Group 2
- Conduct third-party security assessment
- Begin Zero Trust security model adoption

EVALUATION:

The annual evaluation and review will focus on appropriateness of system functionality and its relevancy in promoting significant school reform (i.e., improvement in student achievement test scores, graduation rates, student grade point averages, student performance on ACT and SAT scores, and student dropout rate). They shall utilize both internal and external methods of evaluating the effectiveness of technology integration. Student progress will be assessed using a variety of testing instruments.

- Subject matter tests will be used to measure student learning and competency gains and at least one measure of student performance. It will measure student progress in basic and more advanced academic skills.

- Occupational Competency Test will be used to measure student competency in technology areas as they relate to specific job skills needed in the technology class. They help in standardizing occupational competencies taught in the individual programs.

- State Certification Test - Certain individual programs within the technology setting work cooperatively with their receptive state and national certifying organization. Students in these programs undergo a series of written tests and in many instances a hands-on skills set.

INSTRUCTIONAL TECHNOLOGY ASSESSMENT:

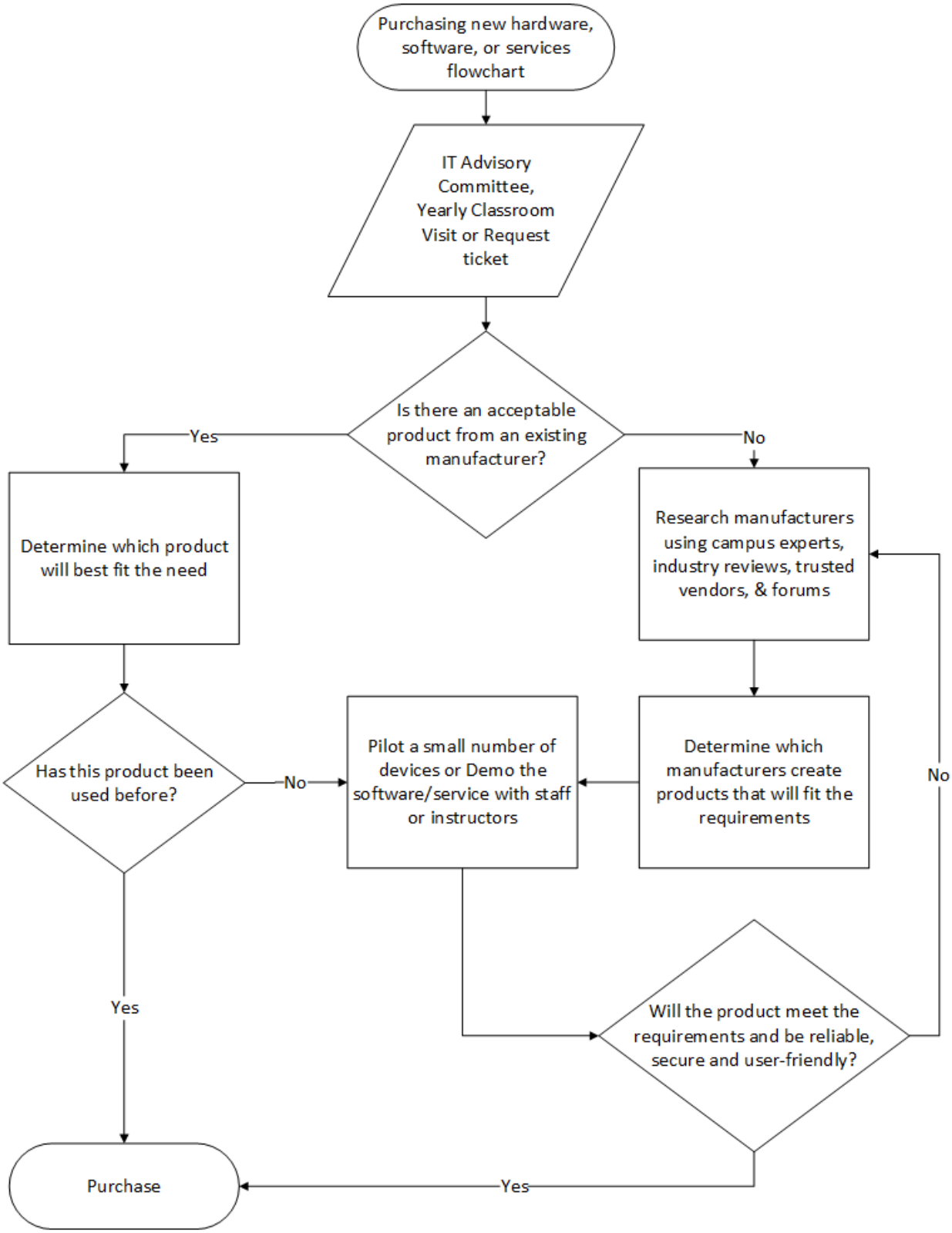
The technology within the School District will be reviewed by annual assessments, with a focus on the extent to which the technology plan is being implemented and the impact of technology on the students, teachers, and classroom. In addition, there will be an assessment of new technologies that reduce cost and improve instruction. The plan will reflect the success of the district in introducing instructional technology to benefit the needs of students, teachers, school, and to determine the technology best suited to deliver curriculum.

The Academic Resource Center is available to all students. In the Academic Resource Center, students work on their technology skills such as computer operation and job readiness. The students produce a resume' and a portfolio to assist them in job placement. The Academic Resource Center will be able to assess the effectiveness of information technology by the percentage of students who successfully complete the training.

In the Academic Resource Center, students are tested to determine current grade levels in math and reading. These evaluations are then used to prescribe a plan of remediation and improvement, through the use of computer software. Records are logged to show the gains that are made in each area.

Instructor assessment will be part of the instructor evaluation to determine how the instructor uses information technology including, but not be limited to: grading, remediation, presentation, career exploration, and research.

Hardware, Software & Services Purchasing Flowchart



Mid-America Technology Center Cyber Security Policy Summary

Modeled: Based on the Center for Internet Security (CIS) Controls. The CIS Controls are a prioritized set of actions that collectively form a defense-in-depth set of best practices that mitigate the most common attacks against systems and networks. The CIS Controls are developed by a community of IT experts who apply their first-hand experience as cyber defenders to create these globally accepted security best practices.

Exceptions: All exceptions will be approved by the IT Director and an Assistant Superintendent or Superintendent. Exceptions must have a valid "business" reason, have no other method available and have additional controls created to keep the school protected.

Control 1: Inventory and Control of Enterprise Assets

Control 2: Inventory and Control of Software Assets

Control 3: Data Protection

Control 4: Secure Configuration of Enterprise Assets and Software

Control 5: Account Management

Control 6: Access Control Management

Control 7: Continuous Vulnerability Management

Control 8: Audit Log Management

Control 9: Email and Web Browser Protections

Control 10: Malware Defenses

Control 11: Data Recovery

Control 12: Network Infrastructure Management

Control 13: Network Monitoring and Defense

Control 14: Security Awareness and Skills Training

Control 15: Service Provider Management

Control 16: Application Software Security

Control 17: Incident Response Management

Control 18: Penetration Testing