WICHITA PUBLIC SCHOOLS

DISTRICT TECHNOLOGY PLAN

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Unified School District 259

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Executive Summary

District Technology Vision

In support of the work of Wichita Public Schools, our vision is to create environments in which technology is naturally integrated into the teaching and learning process and the business functions essential to the management of this large urban school district are maintained. We live in an ever-changing world in which technology is an integral part. For students to live successfully in this world, they must be able to use technological tools to communicate, explore and learn. We are responsible for educating them to use these tools proficiently, effectively and ethically.

The purpose of the Wichita Public Schools' District Technology Plan is to provide direction and guidance for helping us realize our vision. It serves as a framework for refining our standards and guiding our strategic thinking related to technology. Its philosophical underpinnings reflect our values – cost-effective delivery of technology and staff development services of the highest quality. Because it is a "living document" the District Technology Plan is subject to continual revision and refining.

Background

The Wichita Public Schools, the largest school district in the state of Kansas, has more than 50,000 students, 9,000 full and part time employees and more than 100 buildings, schools and support facilities. The district has upgraded to a converged IP network and continues to deploy enhancements that assure continued stability and increased bandwidth. Networks are important, but only as important as the services they support which include Student Information, Food Service, Work Order, Transportation (Edulog), Payroll/Human Resources, Financial, Purchasing (Oracle) and district e-mail systems as well as other centralized services. The district's intent is to integrate systems to eliminate redundancy and complexity of access. In 2013 the district moved to a new student system named Synergy. Data from Synergy and the other systems mentioned are being brought into an IBM product, Cognos to create a repository of data that can be accessed on many levels for reporting to adminstrators and other staff. This creates a platform where student data can reside with curriculum information and business information. As users' application knowledge and skills continue to develop, their ability to use and manage of data for enhancing student learning and improving business practices will increase.

District Curriculum Integration

Current Technology Integration

Instructional Technology Support works in collaboration with the schools and the Department of Curriculum & Instruction Design to focus on enhancing the educational processes, educational technology research/development and technology implementation to support instructional practices. Systems, processes, and practices are in place to collect student performance data at all levels to guide and direct instructional practices and technology integration.

The current ratio of students to computers is slightly above 3:1. This ratio is based upon the computers funded through the district's purchasing cycle, in combination with additional purchases from various sources at each school. Teachers and students have network access in every instructional space. Infrastructure has grown and remote access for employees and students has started to expand as well. Teachers can access email and the student information system from remote locations. Teachers, parents, and students are able to access a wide variety of instructional programs and tools via the district's website and portal and additional links that individual schools have created on their own web pages. As of the summer of 2012, the iPad was introduced for administrators and teachers. The goal is to see how this device can help with productivity and classroom instruction. In the spring of 2013, the Wichita Public Schools Student iPad Initiative was developed to help schools that want to purchase iPads and integrate them efficiently and effectively into their curriculum. As of September, 2015, Wichita Public Schools has 24 buildings using iPads with students. In the summer of 2014, another implementation was started. In order to meet the increasing needs for a lower cost laptop and give our students the ability to engage in 21st Century skills, the district began piloting Google Chromebooks at three of our campuses.

The Wichita Public Schools Technology Plan is designed to meet the needs of the 21st Century Learners as described in the "KSDE Profile of the 21st Century Learner." People in the 21st Century live in a technology and media-suffused environment, marked by various characteristics, including: 1) access to an abundance of information, 2) rapid changes in technology tools, and 3) the ability to collaborate and make individual contributions on an unprecedented scale. To be effective in the 21st Century, citizens and workers must be able to exhibit a range of functional and critical thinking skills related to information, media and technology. KSDE's 21st Century Learner profile, including students and staff, speaks to 10 themes: Creativity and Innovation; Critical Thinking and Problem Solving; Communicating and Collaborating; Information, Communication, Technology and Media Literacy; Flexibility and Adaptability; Initiative and Self-Direction; Social Cross Cultural Skills; Productivity and Accountability; Leadership and Responsibility; Employability and Career Development.

Technology Planning

Board of Education (BOE) policies reflect priorities or practices that the district itself values or believes to be of necessity to function in an efficient and responsible manner.   In addition, as legislative actions at the federal, state and local levels dictate, BOE technology related policies are created or modified to maintain compliance and provide for the enforcement of any mandated requirements. The policies that are created at the district level are often reflected at the school level in the school improvement plans, crafted by staff and stakeholders at that level.
A school improvement plan describes a school's plan for improving student achievement. Currently, plans for technology integration can be embedded into various sections of the school improvement plan, in particular the section dedicated to interventions. At the school level, the instructional leaders often determine the role and prevalence of technology resources, though site councils can play an involved role in this type of decision making as well.

Schools often select technology integration as a significant tool to increase student achievement and identify this intent in their school improvement plan. Instructional Technology Support and the Department of Curriculum & Instruction Design collaborate with these schools and build upon their enthusiasm to develop research projects that are later implemented throughout the district.

Goal
Staff will create, maintain and administer technology policies and practices which contribute to increased student achievement as measured by the MTSS Walkthrough showing increased technology usage.

Objectives:
- Create, review, maintain and communicate appropriate instructional technology related policies.

- Maintain, grow and document the integration of technology into each school improvement plan.

- Encourage and support research, development, implementation, and evaluation of technology integration within the instructional setting.

- Review the District Technology Plan involving key stakeholders.

- Continue to review benefits possibilities of one to one student computing and Bring Your Own Device.

Instructional Technology

Technology integration and implementation planning must be included as an integral part of the district's curriculum and instruction focus. Technology is a tool used to empower student

learning, so USD 259's focus is on student learning with technology as a resource to engage students and provide real world application of skills. As USD 259 prepares students for the 21st Century, it is imperative that we provide an increased use of technology in the school setting. Many of our students have access to technology in the form of smart phones and are using social networks such as Twitter and Facebook as well as texting and blogging. USD 259 has the responsibility to prepare all students for success in the new global economy.

Integration of technology into the curriculum takes many forms in USD 259 from student created broadcasts, connecting with experts through our video network, to iPads and Chromebooks in the classroom. Implementation and integration of technology in the district is varied depending on leadership and resources in the building. All district staff has access to multiple forms of training and the basic tools needed to enhance teaching and learning. Each building has a Site Technology Specialist (STS) who is the first point of contact for all technology issues in the building. Information Services and Technology (IST) provides opportunities during the year for training on technology integration, troubleshooting, and security. All software and hardware purchases are subject to an approval process with the Software and Hardware Committees' involving Curriculum & Instruction Design, school representatives and IST. Recent changes to board policy 1230 opened the door for more interactive resources with continued support for student safety.

Current textbook adoptions often have a technology component which provides resources to both the student and the teacher. USD 259's adoption of Everyday Math, ReadWell, APEX Learning, AgileMinds, Lexia and iReady have such components and also include resources for use at home. Many of our science adoptions have virtual labs as well as test item banks available. The reading adoption Treasures has online resources that are being used in our elementary classrooms. Additionally, many of our intervention programs for students needing tier 2 or 3 instruction have an online component.

Assessment of students, both summative and formative, has always been part of the educational process. The requirements of the Elementary Secondary Education Act (ESEA) have increased the need for additional assessment to guide instructional practices and monitor progress with respect to identified standards. While testing has involved varied levels of automation over the last few decades, the increased demand of computer based assessment where students complete the entire assessment on a computer and the responses are captured and results provided to the district in quick fashion, is a relatively new process. In the spring of 2010, the district moved towards implementing online state assessment (KITE) and continues to support this endeavor through the deploying of new laptops and increasing district bandwidth needed to support this testing.

In the fall of 2013, a new student information system with web-based gradebook, progress and coursework reporting application was introduced. This student information system used by the district provides grade and progress reporting at all levels. This tool was implemented to meet the growing expectation and demand by parents and teachers for a tool that will provide 24/7 access to K-12 student grades, progress and coursework information. This solution has met school-to-home reporting and laid a foundation for better communication.

So while, USD 259 is continuing to provide opportunities for student learning using technology, the District Technology Steering team feels it is time to go to the next level to create the expectation of technology use, not just the opportunity.

As in many districts, USD 259 has pockets of excellence as shown by examples below:

Interactive Distance Learning (IDL) is a term used to describe an interactive educational video network that connects two or more locations, eliminating the barriers of concrete walls, time and distance. These shared video environments are fully interactive with everyone seeing and hearing each other live.

The district uses these video conferencing systems to support classroom instruction. Not only can students take virtual field trips around the world but they have the ability to collaborate and work with experts.

Wild Weather Project - The purpose of the Wild Weather Project is to encourage teachers to use 21st Century learning skills to reinforce the concepts and standards taught in the classroom. The activities will help enrich their curriculum, while at the same time engage students in the learning process. During this project, classrooms will observe the weather and collect data for their region. Classrooms will then share their results with other classrooms from all over the world. Participating classrooms will share information by using the Wild Weather site or by video conference. This will allow everyone the chance to investigate the different climates in different regions. The results will then be available so students can analyze this data. This project will also allow students to work collaboratively, see those participating schools, and also get the chance to reach outside their school walls. In addition to collecting the data, all participants will have the chance to video conference with a meteorologist.

Podcasting,Vodcasting and Broadcasting - Some schools and teachers are creating vodcasts/broadcasts of classroom projects, news shows and posting them to their school websites, school YouTube channels and through a delivery service called Libsyn. The goal is to create a global authentic audience while at the same time sharing their content with parents and community members.

Discovery Education - Discovery Education is a growing library of visual resources (5,000 videos, 50,000 video clips and thousands of images) that can be integrated into lessons with a few clicks of the mouse. Students and teachers can search for resources to clarify or introduce concepts by downloading and streaming videos to be used in instruction and student projects.

iMovie/Movie Maker - Teachers and students use images found on http://schools.clipart.com/ or Discovery Education (DE) pertaining to content and curricular areas in iMovie or Movie Maker to create video projects. Teachers and students download the editable videos from DE in order to add the images to those using video editing tools.

Adobe Connect Professional Learning Communities (PLC) - Currently teachers and staff are receiving weekly professional development virtually through desktop software called Adobe Connect. Multiple topics are covered weekly. All staff can receive Professional Development points through these trainings. Certified staff can use these points for recertification. This virtual PD model has been designed to meet the professional development needs of our busy staff.

Edmodo - To help teachers and students move towards a paperless instructional environment, the district is currently supporting the online classroom management tool called Edmodo. This tool not only supports this paperless learning environment, but also supports a 21st Century learning community by allowing students and teachers access to content and conversations 24/7. This tool also helps support workflow for both the student iPads and Chromebooks allowing the ease of saving and sharing of files.

Student Technology Leadership - The growth of Student Technology Leadership (STL) program has continued to be successful despite the loss of state funding. K-12 schools that wish to participate do so through their school budgets. Students provide support in troubleshooting technology issues within the school building with teacher assistance. In addition, students lead a project based technology conference for the STL groups in the district which allows students opportunities to teach other students technology skills they have learned during the year.

Internet Safety - Library media specialists K-8 and Librarians and HS English Teachers provide students with internet safety program called NetSmartz; they also utilize Common Sense Media. The Library Media Specialist addresses the content as part of their standards and teaches it as part of their curriculum. http://librarymedia.wpsportal.usd259.org

Audio/Video Communications – Audio/Video Communications is a continued field of study at schools which provides students the skills to produce videos with professional equipment. The students are given the opportunity to create commercials for viewing at the school. In addition, ad time is sold to companies as a way to raise money for the school.

STS trainings provide opportunity for Site Technology Specialists to grow professionally. Our Site Technology Specialists are trained on a variety of topics including best practices for integrating technology in the classroom, on how to maintain their servers and accounts, and upkeep all aspects of each school's technology and technology inventory.

USD 259 continues to implement Project Lead the Way and Gateway To Technology, a pre-engineering curriculum for middle schools and high schools in partnership with the State of Kansas and Wichita State University. This project is an outstanding opportunity to place technology in the hands of middle and high school students with the goal of encouraging learning in the areas of math and science. High schools offering this program include East, Heights, Northeast Magnet, Northwest, Southeast and West, along with USD 259's middle schools. North and Northeast Magnet High Schools have also begun implementing PLTW's Biomedical Science program which looks at engineering from a medical science perspective. High schools continue to update curriculum offerings with

the help of the Kansas State Department of Education in an effort of offer students opportunities in the area of high skill, high wage career preparation. Students utilize web based survey and research tools in both middle school and high school.

Goal
- The district has adopted and is transitioning to the Kansas College and Career Readiness Standards. This will produce students that are college and career ready.
- Students will graduate with 21st Century skills.
  http://www.ksde.org/Portals/25/Profile%20Bullets%2011-3-2008%20markup%20v5.pdf
- District has adopted and supports the implementation of the **ISTE National Educational Technology Standards** for administrators, staff and students.
  http://www.iste.org/AM/Template.cfm?Section=NETS
- Staff will provide students with opportunities to engage in learning using technology as measured by increasing observations of Actively Engaged, Student-led learning, Technology use, Adaptation of the Rigor and Relevance Framework documented by the MTSS Walkthrough and iObservation evaluations.
- Students, parents and employees have access to information and technology resources, anytime and anywhere, to assist in the effort to increase student achievement.

Objectives:
- Apply national Educational Technology Standards to identify competencies in Technology for students and staff
- Develop trainings for administrators to demonstrate proficiencies needed by teaching staff to create a 21st Century Classroom.
- Develop 24/7 access to Professional Development

Professional Development

The Wichita Public Schools offers a wide variety of technology-oriented training programs. We recognize that high quality training is critical to the effective and natural use of software and hardware. The primary purpose of curriculum-related staff development is to help district educators learn to integrate technology into the learning process more effectively so that student achievement will increase. Professional development in the district, whether technology related or curriculum focused or both, is targeted to the needs of various groups of employees and delivered in multiple methods.

The district is committed to providing technology training to all employees, not only educators. Multiple methods are being offered which include district level conferences (Tech Summit), face to face, virtual web based training and a district video training library. Most software and technology training is provided by staff at IST in partnership with Curriculum & Instruction Design. Their efforts are occasionally augmented by contract trainers, whose expertise is provided in conjunction with newly acquired software and hardware systems. A train-the-trainer model is often used to maximize efficiency and help ensure that all employees receive needed

training. The district has also allocated a position of Site Technology Specialist at each site to help be the first line of contact for staff for both training and troubleshooting. These Site Technology Specialists work hand-in-hand with IST to help with technology integration training and to provide "just in time" support and help.

Curriculum & Instruction Design has regularly scheduled training sessions each Friday (Learning Lab), involving curriculum specialists, instructional coaches, campus support teachers, data leaders, Multi-Tier System of Support (MTSS) facilitators, instructional technology staff and the leadership members of various departments. There has been a growing effort to integrate technology skills and applications into the weekly training events. An emphasis upon disseminating the skills and applications to instructional staff at all schools has been identified as an expectation.

Employees' day-to-day questions are handled though the district's HELP desk which may be accessed via phone or e-mail. Additionally, trainers use district portal site to provide follow-up support. The district portal has been available for district employees for several years and has been deployed across all levels of operation throughout the district. As more and more of the employees adjust to thinking and accomplishing their responsibilities in a manner that necessitates the use of digital "work spaces" and takes advantage of virtual collaboration, the use of the district portal has grown.

MyLearningPlan.com, a web-based management program, handles registration and enrollment in professional development. Each employee uses My Learning Plan to coordinate and monitor his/her personal professional development plan. The Human Resources department monitors this program and is able to track professional development points and other criteria related to licensure of employees and career advancement credit.

Professional development with a curricular focus is most often provided by Instructional Technology Support, instructional coaches, and curriculum personnel. Professional development of this type is available during the school day in the form of embedded staff development, during district-wide professional development sessions, outside the school day via on-line and face-to-face courses and during the summer months when school is not in session. For new staff, a new staff site is being created to give 24/7 assistance to help support this ever changing cliental. For those new to the district, a special training program called "New Staff Orientation" has been created to provide initial orientation to, and familiarization with, all applicable technology related processes. At the beginning of each school year, this training is provided to new staff. Follow-up support services are then provided by teaching mentors and STS and ITS personnel. Instructional Technology Support is included in the planning teams for new teacher induction to provide support to new teachers

Technology Master Teachers program was implemented beginning in the 2009–2010 school year and continues with internal funding. The goal of the Technology Master Teacher initiative is to build expertise and training capacity for the instructional uses of technology in every Wichita Public School. Technology Master Teachers receive extensive training on integrating technology-rich lessons into the classroom, and maximizing interactive technology to increase

student achievement. The graduates from the program also facilitate training to others in their school and throughout the district.

Goal
Staff will provide professional development opportunities for all employees to increase the successful implementation of technology to meet the 21st Century technology needs of students, teachers, administrators and staff as documented by reports from My Learning Plan.

Objectives:
- IST will partner with Curriculum & Instruction Design and Human Resources to meet the needs of employees for technology implementation

- IST will partner with Curriculum & Instruction Design to help teachers raise student achievement using technology by providing staff development at the district, building and individual teacher level.

- Provide site guidance and staff development as to the use of electronic teaching resources.

District Technology Infrastructure

Organization and Staffing

The use of computers, networks and applications has increased and continues to increase throughout the district at all levels. The need for instructional and technical support has grown along with this increased use of technology. What has been important previously in terms of support, has now become critical as the use of technology is crucial to the district's mission. Computer services, whether supporting instructional goals or business practices must be reliable and delivered in a timely manner.

Four groups provide primary support for technology in the district: Product Support Technicians, Customer Support Services Help Desk Technicians, Network Services Technicians and Instructional Technology Specialists from Information Services and Technology (IST). These groups are accompanied by the Site Technology Specialists (STSs - classified or certificated individuals identified by the principal at each instructional site) in providing technology support for the sites. It is vital that these groups/organizations collaborate in an appropriate manner to ensure that standards and technology direction will be consistent from all service and support providers. While the amount and use of technology in the district has continually increased, these organizations continue to struggle to provide adequate levels of support as the staff has not increased in proportion to the increase in technology.

Budget and Funding

In December of 2005, the USD 259 School Board approved a district-wide five year purchasing plan (which includes a five-year obsolescence plan) to serve as a guide for technology purchasing. Due to funding considerations this 5-year plan was changed to a 6-year plan in 2010-2011. In 2014-2015 we returned to a 5-year plan. We continue to look for additional funding sources such as "facility weighting funds" which are special dollars passed on to the district from the State of Kansas. This special revenue is given to school districts to help equip newly constructed instructional spaces for a limited period of two years after occupancy. This source of funding continued with the new 2010 bond passage only with the support of the state legislature. In order to sustain current technology levels outlined in the purchase plan, an estimated annual budget of approximately 6.4 million dollars is essential. Information outlining this district-wide technology purchasing plan is in Appendix A.

A significant portion of the computer inventory in schools used for instructional and assessment purposes has been funded through means other than the district level general budget. Examples of other funding are: Facility Weighting funding, title, migrant, technology grants, Carl Perkins grants, PTO fund raising, principal discretionary budgets, etc. Computer purchases by these means are typically not consistent from year to year and school to school. These are typically one time purchases without means of replacement in the future, thus our technology base continues to age. In an effort to assist the schools a category has been added to the 5 year plan called the New Technology Purchase Plan. This plan provides the schools the ability to apply for funds to support student centered programs in their schools. These applications are evaluated and funds are provided to support the winning schools.

In addition to funding that provides computers, schools find more and more of their building budgets are being used to purchase consumables such as LCD projector bulbs, and miscellaneous replacement parts for technology items. The amount needed at each school will vary depending upon the amount and types of technology devices they have acquired and how often the equipment is utilized. Beyond principals needing to adjust budgets for specialty supplies, another concern that is surfacing is the need of strategic planning at both the building and district level to address replacement of instructional technology equipment as normal use results in inoperability. In response to the need for projector bulb replacements as well as the replacement of failed projectors, IST administers a program funded on a district level to provide these items. This program was created in an attempt to help alleviate the financial burden and instructional down time of projector and bulb replacements at the building level.

Technology Infrastructure Architecture

The network provides voice and data connectivity to the district for both staff and students using a combination of microwave and fiber technologies. To sustain the network, regular maintenance and upgrades are necessary. The existing microwaves (point-to-point, line of site) will require increased bandwidth for the next generation of software products, client server applications, and multimedia intensive applications. A portion of the network is being upgraded each year and the existing older units are used to build redundant links to reduce the points of failure and outages for our schools or used as spare equipment for older equipment that is no longer serviceable. Upgrades each year are made on the basis of component costs and available funds. This plan for incremental upgrades to the network allows for increases in growth and capacity without, in the foreseeable future, having to do a full upgrade or replacement. By upgrading incrementally we prevent the network from becoming obsolete or requiring a possibly cost-prohibitive upgrade at any one time. We have also added additional fiber to the ring sites in our network to increase the through put of bandwidth to support increased requirements on the network. Network is required to be up 24/7 in support of district wide and school based security systems and applications that are available to staff for anytime, anywhere access using VPN (Virtual Private Network).

Network Architecture

The district maintains a redundant 3 ring design made up of lit fiber and microwave for the entire district. Each ring site is no more than one microwave hop from lit gigabit fiber. Outlying tertiary sites are connected to ring sites. This balance allows us to be less dependent on leased lines and is more cost effective than a complete fiber network. Each ring supports at least 30 sites; at least 5 sites per ring are fiber. The remaining sites are microwave. The cost for this network utilizing both microwave and fiber is about 30% the cost of a fully leased fiber network, thus this has been a significant savings to the district and provides ample bandwidth and system reliability.

Converged IP network forms the basis of voice, video, and data movement throughout the district. It allows for a cost-effective method of transport of all services. Yearly upgrades of microwave units and additional fiber are being done to increase the bandwidth for our schools. Our goal is to provide a 100 megabit connection to each site. The IP network has the ability to dynamically reroute all traffic via different paths where they exist and when an outage occurs.

Wireless services and equipment are installed throughout the district currently door to door at each site and supports up to 300 mbps Dual band. The system's performance allows cost savings in all new sites by reducing 50% of network wiring and 30% of electrical outlets. The wireless system will also provide guest services to each site that allows internet access only and is separated from all USD 259 systems. All sites' wireless access for both USD 259 and guest are centrally managed and controlled.

The phone system supports nearly 12,500 phones/voice lines. We are currently transitioning to IP telephony. 75% of our sites are complete and we plan to complete the deployment by Spring of 2016. In addition to the phone system there is a voice mail system, designed to allow for a voice mailbox for each phone in the district, with multiple voice mailboxes and call routing for school offices. We have in excess of 7,000 voice mail boxes in existence. The district has also

placed a telephone in each classroom. Our voice mail system is linked to Outlook allowing individuals to listen to their voice message and to route them much easier.

Quality and reliable services can only be maintained through the use of standards. A single architecture has been defined for all facilities addressing classrooms, node rooms, and office space. These standards are incorporated in the construction and design standards for LAN/WAN wiring, as well as electrical and electronic standards used for new facilities and remodeling projects in the district.

The District has standardized on Microsoft for its operating system (OS) and office products that are licensed by the district through a School Agreement. The annual review and renewal of this agreement has allowed the district to upgrade the OS on the approximately 43,000 computers located in schools and administrative facilities on a regular basis.

Network security accomplished through a multi-layered approach consisting of the following:
- Acceptable use policies
- Workstation antivirus protection centrally managed and automatically updated
- Workstation encryption
- Email SPAM filtering centrally managed and automatically updated
- Internet filtering centrally managed and automatically updated
- Segregated guest services
- Firewall protection from outside
- Intrusion detection and prevention for core network services

Goal
Staff will create, develop, procure and implement appropriate network architecture, measured by up time statistics, to assist in increasing student achievement.

Objectives:
- Continue to enhance the bandwidth and reliability of the network annually.
- Continue to enhance district wireless network coverage.
- Continue to upgrade sites to IP telephony.
- Continue to identify standards that will ensure stability of the network.
- Incorporate new technology as it becomes available while maintaining alignment with district objectives and remaining cost effective.
- Develop an annual plan to maintain and enhance the technology infrastructure for the district.

Internet and Online Services

Accessibility to information and data has made Internet and online services crucial to USD 259. These venues have become an everyday method of communication for students as well as staff members. Internet and online services are used within the classrooms, by eSchool students and as business tools.

The district has a centralized 5 GIG of Internet with the capacity to grow to 10 GIG. All sites are provided Internet pipe that supplies all sites service.

USD 259 has established district policies and standards which are meant to create a safe and efficient means of communication for students, staff, parents and the community. The district filters all Internet use in accordance with and in some cases exceeding CIPA regulations.

Security software is in place to insure the integrity of data, educational direction and protection of appropriate and lawful use. Software utilized for filtering and security of district Internet and online services demands constant improvement.

Goal
Staff will create, develop, procure and implement appropriate Internet and online services, measured by service availability logs, to assist in increasing student achievement.

Objectives:
- Provide site guidance and staff development as to the use of electronic gateways.
- Continue the growth of usd259.org and the district intranet domain of usd259.net with necessary security features.
- Develop a district portal that will integrate all district internal resources.
- Support the evolution of Internet and online policies that grow with the services provided by these methods of communication, online curriculum, employee services, and student and employee data.
- Promote continued cooperation from multiple departments to expand support as Internet and online services expand in use for students, parents and staff.
- Administer the district policy relating to the district Internet sites and online services that guide a two-way communication system, useful to staff, students, parents, community members, and other visitors (BOE Policy P1230).

Support

The Information Services and Technology (IST) department and the School Service Center (SSC) continue to collaborate to ensure high quality technology-related services to all campuses. The focus of these groups is the continuous improvement of services and support, and they solicit feedback from customers on a regular basis. Both groups provide weekly reports of open work orders to the principal at each site for their review.

Within the IST department, the Instructional Technology Support and Product Support staffs are aligned by MTSS cohort group to provide consistent communications and strengthen services to each building.

The IST Customer Support Services Help Desk provides district users of technology with a central point of contact in order to receive first level support on issues having to do with

technology. The Help Desk manages its requests using an incident tracking system that allows them to track customer requests with a unique work order number. Service requests are received by telephone, email and online via a web application, and every request is logged from the time it is received, to the time it is resolved. If the issue isn't resolved on the Help Desk at the first level, the work order is escalated to second level that has the necessary resources to handle more difficult issues. The IST department also staffs a Network Services Product Support team, sometimes known as 'desktop support' which is responsible for providing on-site field support for the desktops, laptops and peripheral equipment. The Customer Support Services Help Desk assigns the Network Services Product Support team any second level client side issues that the first level is not able to resolve.

Goal
Staff will design and deploy effective support systems for technology integration, measured by increased first call resolution to assist in increasing student achievement.

Objectives:
- Provide high quality services through internal and external partnerships.
- Seek continuous improvement feedback to maintain customer satisfaction.
- Establish and maintain collaborative support teams that will address the needs of the schools in an effective, consistent and timely manner.
- Increase site support by having a full-time Site Technology Specialist in wherever possible.
- Provide professional development opportunities that are available anywhere, anytime, 24/7.
- Continue to provide in-service training for Site Technology Specialists.
- Increase the number of schools that support technology implementation through the implementation of a Student Technology Leadership (STL) organization.

Standards and Efficiencies

Standards are essential to successful technology planning and implementation. Standardization with respect to software, hardware and network infrastructure is essential in order to maintain equipment, provide training and perform all necessary functions in an efficient and effective manner. The complexities of a large urban district dictate a centralized approach to establishing procedures and practices related to software, hardware and network infrastructure. A standing committee for hardware and software, with membership representing a wide range of constituents, has established the standards related to technology use and purchases.

Inventory of computer equipment on a district level is a daunting task. In the summer of 2012 a new technology inventory product, Destiny Asset Manager, was released to the schools to be used to track the school technology inventory including computers, smart boards, projectors, document cameras and other technology equipment. Computer purchases are added to this inventory via downloads from the computer vendor. STSs, with the assistance of IST, are responsible for deleting records from the Destiny Inventory database when equipment is obsoleted and adding additional information such as room numbers where equipment is located.

We have tried using automated systems to achieve accurate inventories and have found them not to be reliable in tracking computers that are increasingly mobile and that do not always show a presence on the network. Manual audits are no longer needed, except in special cases such as funding requirements such as Title. In those cases IST has worked with Title and other departments to perform audits.

An urban school district typically experiences high rates of mobility within certain segments of its student population. Minimizing the impact of mobility on student achievement is a high priority; hence a decision was made to standardize software and hardware within classrooms. Another advantage to the standardization of software and hardware is the leveraged purchasing power it provides the district through bulk purchases. This practice has resulted in reduced cost agreements with various vendors serving the district.

The goal of the obsolescence plan in place is to replace computers when they are five years old. The obsolescence plan, along with minimum hardware specifications will reduce the number of different processors and platforms that technical support personnel must support. Software and hardware standardization results in a reduction of the number of different training programs needed and facilitates the use of just-in-time and train-the-trainer instructional models. Overall these practices reduce the time and effort required to integrate technology into the learning process and enhance district business operations as well.

Software Standards

USD 259's software standards are reflected in applied images to district computers using web hosted applications to ensure data security with respect to FERPA, and these images are maintained and monitored by IST.

A software adoption process has been established to provide centralized guidance as all software products are evaluated, piloted, selected and procured. A set of documents and procedures have been developed called the 'Software Adoption Guidelines and Process' (SAGP) which is used to provide guidance to USD 259 staff. SAGP includes the required forms and defines the necessary steps for acquiring software, and helps to ensure that software acquired will meet the varying needs of the district. The SAGP has been revised and now includes a process for evaluating iOS apps for Apple devices like iPad. In evaluating software, different factors are considered depending upon its intended use. Some factors such as hardware and network requirements and ease of use and administration apply to all software considered for purchase. Other factors are unique to the purpose of the software. For example, curriculum software must align with curriculum standards and address concerns related to student mobility. The district requires the automation of user accounts using Active Directory (MS SAML protocol) and data feeds for both students and staff from software vendors to conform to the district's single sign on methodology. The committee's goal is to find the best products at the lowest price and to ensure standardization across the primary and secondary levels and whenever possible and appropriate, across the entire school district.

To reduce costs and promote uniformity the district seeks district or site software licenses whenever available. Bulk purchases for approved software, such as Adobe are made two times a year and the ordering process is administered by IST. The Microsoft Windows operating system is the district standard for all personal computers and the Apple Computer operating system is the standard for all Apple computers. The district standard for email, word processing, spreadsheet, publishing, personal database, and presentation software is the Microsoft Office Suite.

Goal
Staff will select software for purchase that aligns with district curriculum using a standard process.

Objectives:
- Establish budget line items to provide on-going funding for software application purchases.
- Maintain and improve the Software Adoption Guidelines and Process.
- Continue standardization of software across school levels and whenever possible the entire school district.
- Maintain awareness of national and international technology issues to remain on the leading edge of technology integration.
- Purchase curriculum software that is aligned to district initiatives and to common core state standards.
- Purchase web-based applications that can be centrally managed and administered whenever possible.
- Purchase district licenses to lower costs and ensure standards.
- Maintain Single Sign On methodology whenever possible.
- Continue to use pilot projects to evaluate the ability of new and emerging software to meet our needs.
- Maintain nightly data feeds for staff and student alignment.

Hardware Standards

The Hardware Standards Committee (HSC) meets regularly to ensure that standards are current, appropriate and address requests for exceptions to the approved standards and to discuss related issues. The Hardware Standards Committee has oversight of the hardware technology standards for both instructional and administrative use. The committee's scope includes recommendations for new computers (desktops, laptops, servers), monitors, network adapters, document imaging (printers, copiers, scanners), mobile technology, hand held devices, digital projectors, document cameras, and interactive whiteboards. The district continues to allow dual platforms, both PC/Microsoft and Apple/Mac, however acquisition, use and support is restricted for the Apple devices, which require additional approval.

The committee also establishes the minimum hardware specifications for donated computer equipment. The Wichita Public School system supports the established goal to maintain all computer workstations on a 5 year obsolescence/replenishment cycle (Appendix A). The district encourages schools to purchase approved hardware technology through the Bulk Technology Hardware Order Process two times per year, thus leveraging buying power and getting lower cost and many value added services. The Bulk Technology Hardware Order Process is administered by IST.

Goal

Staff will ensure responsible allocation of budget and staff through the standardization of hardware, measured by our ability to maintain current service levels, to support student achievement.

Objectives:
- Maintain budget line items to provide on-going funding for technology hardware purchases to support the 5 year obsolescence/replenishment cycle.
- Remain continually aware of national and international technology issues to remain on the leading edge of technology integration.
- Foster strong vendor relationships to leverage value added services.
- Ensure that the district-wide 5 year obsolescence/replenishment cycle continues.
- Maintain an electronic inventory database to track the various hardware technology located at each site.
- Maintain a dual platform standard, allowing both Windows/PC and Apple/Mac computers to be utilized in the instructional environment. The Windows/PC platform is 100% fully supported. The Apple/Mac computers are supported for specific instructional needs as are Chromebooks.
- Continue and improve the Bulk Technology Hardware Order process to collectively purchase technology hardware.
- Continue to utilize pilot projects to determine the value of new and emerging hardware products to ascertain their effectiveness for students.

Application Development

Wichita Public Schools has various specialized business applications to meet district needs for financial services, human resources, student management, facilities maintenance, nutrition services and others. It is vital that all business applications effectively interact to provide efficient services district wide. IST continues to build interfaces which allow access to information from the primary source from other applications. These interfaces provide data integrity and eliminate dual entry. They also permit real time validation or automated scheduled updates of system validation files. The development of partnerships between district entities and vendors will help ensure the individual application upgrades will not impact the integrated links.

IST facilitates functional steering committees of users to prioritize project work and continue to evaluate the goals and objectives of the functional departments and the district. As business needs change, applications are enhanced to incorporate desired features or determine whether to replace an existing application and purchase another product. IST represents the district needs through vendor interactions to influence the direction of application development.

IST technical staff has established interoperability between the various applications, customized functions and reports. Each of these applications requires continual monitoring for optimum performance and periodic upgrades for functionality enhancements. As each application is upgraded ongoing evaluation of the impact to integrated links is done. The successful implementation of software changes is accomplished through analysis, development, testing (quality assurance) and training. All products will be maintained by applying upgrades on a regular and timely basis.

Oracle and Microsoft SQL are the district-adopted database platform standard for district-wide, application data storage. They offer robust backup and recovery options, including the ability to maintain hot standby copies of databases at a remote site so that a disaster at the primary IST site will not cause data loss and will have minimal impact on application availability. These databases offer the ability to connect thousands of users to a database concurrently, therefore they are the platforms required for district applications. Oracle runs best and most reliably on the Sun Solaris server platform. For applications that do not support connections to Oracle databases the district uses the Microsoft SQL Server database engine. Applications that can only use data storage engines other than Oracle or Microsoft SQL Server are only implemented if the benefits of using the application outweigh the negative impact of bringing a non-standard database in-house.

The vendor of any software hosted outside the district is required to prove that they handle district data safely and securely. The district carefully monitors vendor compliance with security standards.

Goal
Staff will evaluate applications on a regular cycle to ensure that the district is using appropriate applications to support increasing student achievement.

Objectives:
- Create and maintain application environments that are user platform independent and that will allow for the building of interfaces between products, reports and data security.
- Establish purchasing practices that meet application specifications, hardware, software and database standards.
- Interface with 3rd party applications that proficiently provide functions to meet needs outside of the core applications or development of customized functions to the core business application.

- Create query tools for data analysis that provide real time access to information stored in multiple applications.
- Maintain in-house expertise in implementation and management of a standard database engine(s).
- Simplify application interfaces and customized queries.
- Provide high uptime for district applications.
- Provide high data throughput by using expert tuning strategies.
- Provide data security and safety by taking advantage of distributed database technologies so that a disaster at one site does not cause data loss.
- Minimize licensing issues and costs by taking advantage of enterprise-wide licensing opportunities.

Data Architecture

The district's data repositories represent a tangible asset with significant value. A specific standard for data architectures supports consistency and concurrency of the district's data. Ideally, each data element is stored on one, and only one, system. Given that business requirements often dictate that data from one system be available to other systems, the data architecture standard requires that this data visibility be facilitated through the use of software database link technology rather than duplicate storage.

Widespread use of Open Database Connectivity (ODBC) tools to connect to Oracle and/or Microsoft SQL Server databases by end users is discouraged for security reasons. The district applications implement custom security and business rules and it is not advisable to work around them. Additionally, it is technologically possible for users to change or damage data inadvertently while connected directly to databases with such tools. Special products made to facilitate safe database connectivity are used by IST personnel to facilitate linking SQL Server databases to Oracle databases so that a coherent view of disparate data is made available to applications that need data from those systems concurrently.

Data that may have enterprise-wide use should not be stored on servers at individual school sites. Enterprise-wide data should be stored centrally so that all users with the need to view the data may do so.

Data architectures are managed and administered by database administrators at IST. The database administrators are responsible for creating and maintaining the required linkages so that users can view data from disparate sources without having to manage linking sources themselves.

The district utilizes a repository and reporting system for a variety of student academic history and assessment data. This repository is fed data from sources both within district applications and from outside sources. This data is available to provide a comprehensive look at performance across the district that can be accessed by each school. Utilization of this repository and its reporting is constantly evolving and the district continues to look for new and more effective ways to use data.

Goal

Staff will create and implement appropriate data architecture design to support efforts to increase employee effectiveness and student achievement.

Objectives:
- Maintain consistency and concurrency of district data assets so that business requirements can be fulfilled.
- Maximize the safety, availability, and usefulness of each data repository through competent management and administration.
- Maintain strict data visibility security through the enforcement of business and security rules as implemented by the various district applications as well as by district security policies.
- Allow end users to see a consistent, up-to-date, seamless view of data, regardless of the number of different data systems involved, through the use of links instead of duplicate storage.
- Continue to grow our data repository and enhance its uses.

5 Year Master Computer Replacement Plan – Attachment A

2015-2016	2016-2017	2017-2018	2018-2019	2018-2020
720 MS Technology Lab Desktops	**Student Technology Requests**	**1731 Laptops w/docking stations and case for HS/MS** • **Teachers** • **HS/MS Special Ed Teachers** • **HS/MS ESOL**	**110 Library Checkout Desktops**	**1807 Elementary Teacher Laptops w/ docking station and case** • **Elementary Teachers** • **Elementary SPED Teachers** • **Elementary ESOL Teachers**
Student Technology Requests		**HS/MS Office Computer Replacement**	**Student Technology Requests**	**Elementary Offices - Desktop Computer Replacement** **Count to be provided by audit of existing**
		27 Secondary Principals Laptops		**57 Elementary Principals Laptops**
		194 HS/MS Child Study Team Laptops w/ docking station and case		**266 Elementary Child Study Team Laptops** • **Counselors** • **Nurses** • **Psychologists** • **Social Workers** • **Speech Therapists**
		7 Athletic Directors		**Assistant Principal Laptops**
		60 HS/MS Assistant Principals		