



# BIG SPRING SCHOOL DISTRICT

## Office of the Technology Director

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## District Technology Plan

**District Mission:** The Mission of the Big Spring School District is to provide challenging curricular and extracurricular opportunities, within a safe environment, that meet the unique needs of every individual by expanding interests, enhancing abilities, and equipping every student with knowledge, skills, and character essential to become a responsible citizen of our community, our nation, and the world.

**District Vision:** Shaping the future, one student at a time.

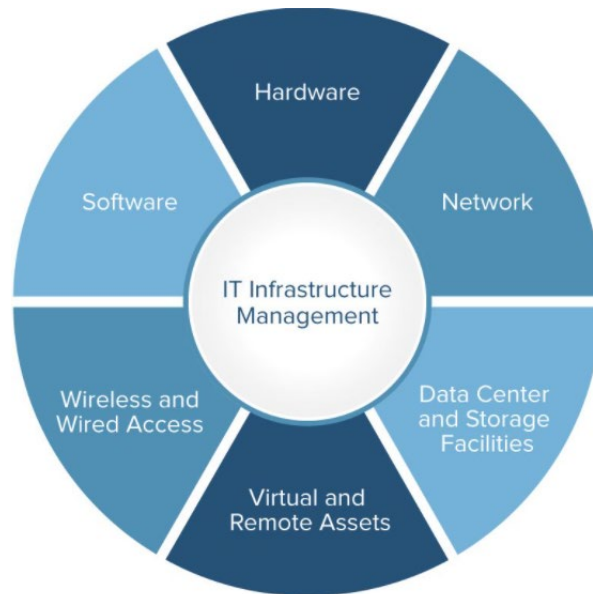
**Technology Mission & Vision:** The Big Spring School District recognizes that technology is an essential tool that allows our students and staff to communicate and acquire knowledge in a rapidly changing world. The district's Technology Department aims to provide reliable, efficient, current and accessible technology to maximize education opportunities. All students will have access to technology-rich learning experiences so they may become lifelong learners and productive members of the 21<sup>st</sup> century workforce.

### Technology Goals:

- Develop and support resources necessary to promote technology proficiency and high academic standards by all learners.
- Ensure the families and community members have access to technology resources that enable them to be actively engaged in partnerships that encourage high student achievement.
- Provide all stakeholders with access to timely and accurate information to assist in streamlining the delivery of instruction and enhancing the efficiency of business operations.
- To maintain an infrastructure that supports increasing device counts, bandwidth, and software usage.
- Protect the integrity of the district's information and IT assets by strengthening our cybersecurity posture.

# Current Assets and Supports

## *Infrastructure Overview*



Big Spring School District has made a substantial commitment to technology in the classroom. We currently have a District wide data network in place with over 3,000 network clients. This investment in infrastructure and equipment is in a constant state of renewal, in that as we purchase new equipment whenever possible our existing equipment is repurposed and reassigned to an appropriate location. This helps us target needs across our district and ensure that we are maximizing the value of our equipment.

The District currently supports 66 network switches accommodating 6 Ethernet ports and a Wi Fi access point in each classroom. The wide-area data network on the campus connects five buildings via self-provisioned point-to-point fiber optic links at 10 Gbps. All IDF wiring closets have a direct 10GB link to the core switch in the District Office MDF. One building is connected via microwave transmission at 2 Gbps. The District Office MDF is connected to the Capital Area Intermediate Unit via a point to point 3 Gbps fiber link for internet access. The District subscribes to 550 Mbps internet bandwidth through the IU Consortium. All central network equipment, Wi Fi APs, and phones are powered through uninterruptible power supplies and diesel generators.

## *Infrastructure Objectives*

- Continue to upgrade network and Wi Fi infrastructure to meet site and district needs.
- Review internet bandwidth usage regularly and determine annually if bandwidth needs to be increased in order to meet site and district needs.
- Extend self-provisioned point-to-point fiber optic link to Newville Elementary.
- Replace broken/deprecated network equipment.

## ***Hardware Overview***

### ***Classrooms***

Big Spring School District commits to a minimum level of technology access in all district classrooms. This level is currently defined as encompassing the purchase, installation, maintenance, repair of the below resources:

- 1 Teacher Computer
- 1 Projector/Smartboard or 1 Interactive Panel
- 1 VoIP Telephone
- 1 Wi Fi Access Point
- 1 IP Clock/Intercom speaker
- Network Connectivity
- Access to a centralized printer

### ***Student 1:1 Devices***

Big Spring School District commits to provide an effective and sustained 1:1 program for all students to have access to the tools and resources necessary to participate in classes whether in-person or remotely. The current 1:1 devices are:

- Kindergarten – iOS devices
- Grades 1 to 8 – Chrome OS devices
- Grades 9 to 12 – Windows devices
- Special Ed – all the above with accommodations where defined

### ***Specialized Devices in Classrooms***

The district commits to provide specialized hardware for specific coursework in the curriculum such as Computer Aided Design, Advanced Media, Civil 3D, and Art.

### ***Hot Spot Program***

The district commits to ensure internet access for all students through 112 internet hotspots that are provided free to families without internet either due to lack of service where they live or due to financial hardship.

## ***Hardware Objectives***

- Migrate high school and middle school to Interactive Panels
- Purchase desktop computers for all high school and middle school classrooms
- Replace broken/end of life computer equipment

## **Learning Resources**

### *Overview*

The district's virtual learning environment is a collection of interoperable web-based platforms that provide access to teaching and learning resources. Available software supported by the District includes:

<ul style="list-style-type: none"><li>• Aimsweb</li><li>• Aspen (SIS)</li><li>• Big Ideas Math</li><li>• BrainPop / BrainPop Jr</li><li>• CAOLA (Cyber School)</li><li>• Clever SSO</li><li>• Codesters</li><li>• ConnectEd</li><li>• Destiny</li><li>• Discovery Education</li><li>• DRC Insight</li><li>• Edmentum Plato</li><li>• EdPuzzle</li><li>• Envisions Math (Savvas)</li><li>• ExploreLearning Gizmos</li><li>• Flextime Manager</li><li>• Freckle Renaissance</li><li>• Get More Math</li><li>• Google for Education</li><li>• IKnowIt</li><li>• I-Ready</li><li>• IXL</li><li>• NWEA/MAP</li><li>• Lexia (Core 5 &amp; PowerUp)</li><li>• Learning A-Z</li><li>• Microsoft Office</li><li>• Naviance</li></ul>	<ul style="list-style-type: none"><li>• Pear Deck</li><li>• Performance Matters</li><li>• RAZ Kids</li><li>• Read &amp; Write / TextHelp</li><li>• Read Live</li><li>• Read Works</li><li>• Registration Gateway</li><li>• HMH / SAMS</li><li>• Scholastic</li><li>• Seesaw</li><li>• SMART Technology</li><li>• Study Island</li><li>• Terrace Metrics</li><li>• ThinkCerca</li><li>• Tynker</li><li>• Typesy</li><li>• USA Test Prep</li><li>• Xtra Math</li><li>• Adobe</li><li>• Blackboard (website and connect)</li><li>• Bright Bytes</li><li>• Eduplanet</li><li>• Forecast 5</li><li>• Go Guardian</li><li>• iepWriter</li><li>• Lifetouch</li><li>• Navigate 360</li></ul>
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### **Learning Resources Objectives**

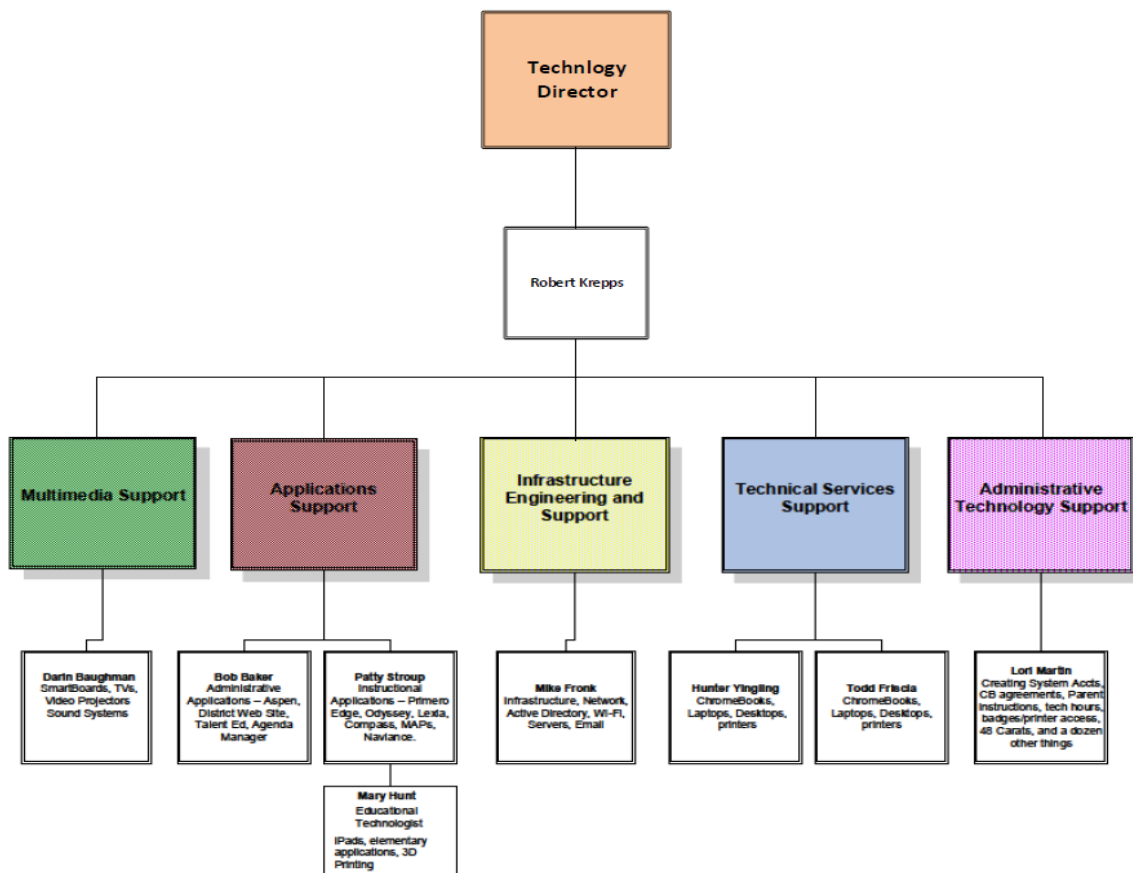
- Continue to establish and or revise policies and procedures involving acceptable use, digital citizenship, content filtering, and passwords.
- Ensure students, educators, and parents have continuous access to digital content and resources aligned to district's curriculum.
- Establish and grow a digital resources portal to share and collaborate tips, strategies, guidelines to professional staff, families, and administrators across the district.

## Technical Support

Six full-time IT Service positions are staffed by Questeq, Inc. With corporate headquarters in Coraopolis, PA, Questeq specializes in outsourcing technology for K-12 districts in PA and has been in business for over 35 years. The district has an ongoing contract with Questeq to provide technical resources on the ground, along with a centralized Help Desk and NOC (Network Operations Center). These positions include a Technology Director, an Infrastructure Engineer, an Applications Manager, two Computer Technicians, and a Multi-Media Specialist.

In addition to Questeq, the District IT staff consists of 1 full-time and 2 part-time staff. These positions include a Business Applications Manager, part-time Administrative Assistant, and part-time Educational Technologist (dedicated to the elementary buildings).

Over the past 12 months, covering the period February 1, 2020 to January 31, 2021, the Information Technology department responded to and resolved over 4,000 help desk tickets.



## Technical Support Objectives

- Promote and ensure Customer Satisfaction by incorporating state of the art tools and processes that utilizes IT Service Management best practices.
- Ensure the availability of and access to information that enables stakeholders to make timely, informed decisions by strengthening data and knowledge management approaches.
- Adopt new information technologies to improve business and IT operations.

## ***Curriculum Support***

Learning targets guide when and how technology is used. Technology is never invested in solely for its own sake, instead it is leveraged and prioritized to:

- Help students meet learning goals aligned to district and state standards.
- Provide access to up-to-date enhanced resources aligned to district curriculum.
- Support differentiation. Technology tools make it easier for teacher to adapt and modify learning activities and resources to meet the needs of diverse learners.
- Technology tools can be used to give teachers and students timely feedback regarding whether students are learning, allowing teachers to respond more quickly when students are confused and move on more readily when everyone has learned the material.
- Staff professional development in effective use of technology with students is offered as new curriculum is adopted.
- Online safety and cyberbullying prevention lessons are in place at a variety of grade levels.

## ***Assessment of Technology***

The Technology Department will conduct a systematic review of the District technology needs and requirements, considering what is needed today, and the expected needs based on the District strategic plan. The goals of the ongoing assessment are:

- Identifying aging and inefficient hardware, software, infrastructure, and connectivity required to support learning.
- Highlight any technology gaps and identify possible solutions through conducting market reviews and cost-benefit analysis.
- Prioritizing needs to enable making decisions about how best to allocate resources.
- Identifying financial planning considerations and recommendations.

## ***Financial Forecast for 2021 - 2025***

Access to technology is generating new learning opportunities in the classroom. It enables teachers to evolve educational models to include personalized instruction, new collaboration models and many new innovative and engaging strategies.

Funding technology infrastructure, 1:1 devices, and digital learning resources requires strategic, short-term and long-term financial planning in order to maintain the sustainability of the Technology Plan henceforth.

<b>Technology General Budget</b>	<b>20-21 Forecast</b>	<b>21-22 Forecast</b>	<b>22-23 Forecast</b>	<b>23-24 Forecast</b>	<b>24-25 Forecast</b>
Teacher Laptop Lease	118,684	118,684	206,000	118,000	118,000
Classroom Technology Supplies and Software	86,638	101,169	92,500	106,823	92,500
Classroom Computer Equipment	37,500	83,870	37,500	37,500	37,500
District Software Contracts	84,494	98,378	98,378	98,378	98,378
Internet Connectivey & Hotspots	69,138	79,859	45,510	38,138	38,138
Non Classroom Technology Supplies	16,000	16,000	16,000	16,000	16,000
Infrastructure Computer Equipment	12,500	12,500	12,500	12,500	12,500
District Phones	35,700	35,700	35,700	35,700	35,700
CAIU Hosting and Software Contracts	36,927	23,400	23,400	23,400	23,400
Hardware Maintenance Agreements	30,861	36,852	31,861	33,861	33,861
Misc Staff & Office Expenses	7,100	7,100	7,100	7,100	7,100
Questeq Contract	743,057	743,057	757,918	773,077	788,538
1:1 Equipment	521,345	305,500	300,000	300,000	300,000
	<b>\$1,799,944</b>	<b>\$1,662,069</b>	<b>\$1,664,367</b>	<b>\$1,600,477</b>	<b>\$1,601,615</b>
<b>Technology Capital Projects</b>	<b>20-21 Forecast</b>	<b>21-22 Forecast</b>	<b>22-23 Forecast</b>	<b>23-24 Forecast</b>	<b>24-25 Forecast</b>
Interactive Panel TVs		1,100,000			
Oak Flat and Newville Fiber Install	150,000				
Upgrade Core Network Switch and Servers		80,000			
High School Update Cat6 Cabling			275,000		
High School Bells, Clocks, Intercom			250,000		
Xcountry Sound System		20,000			
DAO CAT6 Cabling				125,000	
Security Camera System Servers and Engineering		150,000			
Security Camera Replacements					500,000
Network Switch Replacements					
Upgrade DAO Storage Network and Servers			100,000		
Upgrade District WiFi			330,000		
	<b>\$150,000</b>	<b>\$1,350,000</b>	<b>\$955,000</b>	<b>\$125,000</b>	<b>\$500,000</b>