

## Colorado Springs School District 11 Technology Plan

July 1, 2015 – June 30, 2020

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### INTRODUCTION AND MISSION STATEMENT

#### *General information on the school district, its services, and its mission*

Colorado Springs School District 11 is an urban school district with approximately 29,000 students in 49 traditional schools, 11 alternative schools and programs, and 7 charters. District 11 provides more choices for parents and students than any other school district in Colorado Springs. District 11 has International Baccalaureate programs at the elementary, middle, and high school levels and programs like CORE Knowledge, Advanced Placement, a unique Gifted and Talented program, a comprehensive Career and Technology Education program, and the only public Montessori program for elementary age students in the region.

District 11's vision that "every student (is) prepared for a world yet to be imagined" is being carried out through our mission to "provide excellent, distinctive educational experiences that equip students for success today and in the future." We are accountable to our local Board of Education and provide frequent reports to them around our seven Business Plan goals that include:

1. Demonstrate improvement of student achievement
2. Demonstrate a high-performing team
3. Embrace a culture of constant innovation.
4. Communicate and engage frequently with our customers
5. Provide a safe learning and working environment
6. Demonstrate operational efficiencies
7. Demonstrate fiscal prudence and financial responsibilities.

As the district works to implement its vision to prepare each student for a world yet to be imagined, we are using a Next Generation Learning model. Next generation learning in the district is not a program, rather it is the systematic approach to teaching, learning, and ultimately the educational experience designed to inspire educators and learners alike, while developing a set

of skills and outcomes in five equally important, competency areas: Academic, Professional, Entrepreneurial, Personal, and Civic.

The Division of Technology Services supports the District's goals through its own goals which are:

- Technology Availability
- Service to People
- Relentless Innovation
- Accountable Stewardship
- Safety and Security

District 11 staff will continue to support district and division goals with the implementation of this plan until we have all of our students prepared for a world yet to be imagined!

***Explanation of how the technology plan was developed, who was involved in the process, and what processes will be used to review and update the plan as needed***

This technology plan was developed by staff in District 11's Division of Technology Services in collaboration with the Division of Instruction, Curriculum, and Student Services to support goals in District 11's Business Plan. It was reviewed and accepted by the Superintendent.

This plan will be in place until June 30, 2020 and will be reviewed annually and updated as needed by staff in the Division of Technology Services.

## **NEEDS ASSESSMENT**

History: District 11 has incorporated technology purchased through two bond elections, one in 1996 and another in 2005. With the bond money, the District has a very robust infrastructure highlighted by leased and owned fiber optic technology. All data and phone systems use the fiber optics to tie into the central administrative complex computer room to out to the internet or phone system.

To highlight some of the basics, the fiber optic backbone consists of two 10gb fiber optic rings using SmartOptics technology which gives a 10gb direct connection to each school. Within the schools, there is multimode fiber going to a consolidation point and, from there, Cat 5E Ethernet cabling to the desktop. The switches at half of the schools have a 1gb fiber uplink and 100mb dedicated Ethernet port to the desktop. At the other half of the schools, there is a 10 gb uplink with 1gb dedicated to the desktop through high capacity PoE switches. The District also has IP

security cameras within the schools and has wireless 802.11n or 802.11ac access points in every classroom. Since the District is not 1:1 capable at this time, this allows students to bring their personal devices to connect to do research and homework.

The telecommunications portion of the network has been continually updated and currently consists of Avaya 8730 voice switches along with digital phones in every classroom for safety purposes and on every staff desktop in the District. The phone system also has voice mail for staff and teachers. We have implemented E911 services for classroom safety.

For the future, the District will need to continue to build upon the current infrastructure to enhance learning opportunities. The District needs to upgrade the other half of the schools to full gb switches to the desktop and 10gb uplinks at the edge switches. Finally, the District will need to upgrade the datacenter to provide 40/80/100gb or greater head-end switches with fiber optic capability. To take full advantage of the existing infrastructure, we will need to purchase updated infrastructure devices. With all of that in place, the District will have to purchase or lease more internet capability to allow greater access to the internet.

There are tremendous learning opportunities on the web and more and more software vendors are changing to strictly web-based software versus client-based software. The District wants to expand the learning opportunities to an anytime, anywhere capability by using up-to-date district-owned, private and hybrid cloud technology. We currently have all staff and students on Office 365, but need to expand all storage capacities for e-mail retention, archiving, and disaster recovery along with added storage capacity for intensive student engagement and portfolio enhancement. To ensure staff is offering best practices in the use of technology in the classroom, the District will build capacity of all instructional staff in technology skills through professional development classes and support.

**Mobile Device Management:** We have purchased a Mobile Device Management (MDM) platform, Lightspeed, that we are using to manage 280 District owned phones and 5,980 wireless iOS mobile devices across the District network. This will give us the ability to manage settings and install upgrades and software to iPads and other iOS mobile devices without having to physically touch every device. We also have entered into a contract for an Apple/MAC management platform to improve management of those devices, this system will be implemented spring of 2018.

**Power Device Management:** We have purchased a power management platform, Nightwatchman, to provide shutdown, wakeup and sleep capabilities for our 20,000+ Microsoft

based computers, across District sites and facilities. This system in use over the past two years has resulted in energy savings of \$280,000 annually.

**Fiber Optic Equipment Upgrade:** School district 11 currently owns 40 miles of fiber and leases over 50 miles from the Colorado Springs Utilities. We do have a 10 gb direct point-to-point connection to each school.

**Voice Mail Upgrade:** We have upgraded the districts voice mail service. Features of the new system include:

- Access voice mail from any district phone
- Access voice mail from the district's intranet
- Voice mail notification can be sent to an individual's email with the ability to play the message.

## GOALS, OBJECTIVES, STRATEGIES AND ACTIVITIES FOR ET-IL

### 1. Infrastructure

- A. Upgrade the other half of the schools to full gb switches to the desktop and to 10gb at the edge switches.
- B. Upgrade the wireless access points to 802.11ac technology.
- C. Upgrade the datacenter, replacing it with 40/80/100gb or greater head-end switches with fiber optic capability.
- D. Purchase updated infrastructure devices.
- E. Purchase or lease, as necessary, more internet capability to allow greater access to the internet. The District currently has a 5gb internet capacity with the capability to increase in 1gb increments.

### 2. Learning Opportunities

- A. Expand the learning opportunities to an anytime, anywhere capability by using up-to-date district-owned, private and hybrid cloud technology.
  - Provide district owned student devices for equivalence of at least 120% of the enrollment of the largest grade level in each school to support instructional needs and online assessments in lab settings

- Increase number of district owned devices and encourage Bring Your Own Device (BYOD) to achieve a 1-to-1 environment.
  - Establish a four year replacement cycle for district owned devices.
  - Monitor bandwidth in order to ensure bandwidth is adequate to handle both assessment computers and BYOD on high need days.
  - Expand all storage capacities for e-mail retention, archiving, and disaster recovery along with added storage capacity for intensive student engagement and portfolio enhancement.
  - Ensure common teacher technology toolkits are in each D11 classroom.
- B.** Build capacity of instructional staff and students in technology skills through professional development classes that support responsible innovation in a teaching and learning model.
- Provide training for student and staff concerning the appropriate use of technology, including safety and privacy safeguards and protocols specifically the CIPA requirements of: 1) appropriate online behavior, 2) safety and privacy, and 3) cyberbullying.
  - Create technology-based student internships
- 3. Provide annual notice to parents and legal guardians concerning the type of data transferred to cloud computing service providers.**
- 4. Provide notice to the parent of legal guardian if there is a security breach or other unauthorized disclosure of his or her child's information.**

## PROFESSIONAL DEVELOPMENT STRATEGY

District 11's professional development plan provides ongoing sustained professional development for teachers, principals, administrators and school library technology personnel serving the district. The strategy includes:

- Provide professional development classes to build capacity of all instructional staff in technology skills that support responsible innovation in a teaching and learning model.
- Provide training for staff concerning the appropriate use of technology, including safety and privacy safeguards and protocols specifically the CIPA requirements of:  
1) appropriate online behavior, 2) safety and privacy, and 3) cyberbullying including District 11 Board of Education approved i-Safe and commonsensemedia.org programs.

## EVALUATION PLAN

D11 staff noted in responsible party section of chart below will monitor and report on progress toward completion of goals.

<i>Responsible Party</i>	<i>Goals – Did we do?</i>	<i>Progress</i>
<i>Director, Network Services</i>	<p>Infrastructure</p> <ul style="list-style-type: none"> <li>A. Upgrade the other half of the schools to full gb switches to the desktop and to 10gb at the edge switches.</li> <li>B. Upgrade the wireless access points to 802.11ac technology.</li> <li>C. Upgrade the datacenter switches, replacing it with 40/80/100gb or greater head-end switches with fiber optic capability.</li> <li>D. Purchase updated infrastructure devices.</li> <li>E. Purchase or lease more internet capability to allow greater</li> </ul>	<ul style="list-style-type: none"> <li><b>A. Fiber Optic Equipment Upgrade:</b> D11 currently owns 40 miles of fiber and leases over 50 miles from the Colorado Springs Utilities. We currently have a SmartOptics solution in place that provides a 10GB dedicated internal connection to each school.</li> <li><b>B.</b> Have 17 schools upgraded to 802.11ac access points using e-rate and Distrcit funds.</li> <li><b>C.</b> Awaiting funding</li> <li><b>D.</b> Awaiting funding</li> <li><b>E.</b> Have upgraded the internet capacity to 10gb with the capability to upgrade in 1gb increments up to 10gb in the future.</li> </ul>

<i>Responsible Party</i>	<i>Goals – Did we do?</i>	<i>Progress</i>
	access to the internet.	
<i>Project Manager, Technology Services</i>	Learning Opportunities - Expand the learning opportunities to an anytime, anywhere capability by using up-to-date district-owned, private and hybrid cloud technology.	In progress, especially using Office 365 for all staff and students and using a learning platform in some schools.
<i>Assistant Superintendent and Chief Information Officer, Division of Technology Services</i>  <i>Director, Technology Services</i>	<p>Provide district owned student devices for equivalence of at least 120% of the enrollment of the largest grade level in each school to support instructional needs and online assessments in lab settings</p> <p>Increase number of district owned devices and encourage Bring Your Own Device (BYOD) to achieve a 1-to-1 environment.</p> <p>Establish a five year replacement cycle for district owned devices.</p> <p>Better manage D11 devices with Mobile Device Management (MDM) and Power Device Management (PDM).</p>	<p><b>Mobile Device Management:</b> We have purchased a Mobile Device Management (MDM) platform, Lightspeed, that we are using to manage 280 District owned phones and 5,980 wireless iOS mobile devices across the District network. This will give us the ability to manage settings and install upgrades and software to iPads and other iOS mobile devices without having to physically touch every device. We also have entered into a contract for an Apple/MAC management platform to improve management of those devices, this system will be implemented spring of 2018.</p> <p><b>Power Device Management:</b> We have purchased a power management platform, Nightwatchman, to provide shutdown, wakeup and sleep capabilities for our 20,000+ Microsoft based computers, across District sites and facilities. This system in use over the past</p>

# District 11 Technology Plan

**2015-  
2020**

<i>Responsible Party</i>	<i>Goals – Did we do?</i>	<i>Progress</i>
		two years has resulted in energy savings of \$280,000 annually.
<i>Director, Network Services</i>	<p>Monitor bandwidth in order to ensure bandwidth is adequate to handle both assessment computers and BYOD on high need days.</p> <p>Expand all storage capacities for e-mail retention, archiving, and disaster recovery along with added storage capacity for intensive student engagement and portfolio enhancement.</p>	<p>Monitor on a daily basis to see how much bandwidth is being used. With Office 365 in place, there is much more outgoing bandwidth used than incoming. Need to upgrade the Firewalls to account for the change in access.</p> <p>Awaiting funding and plan finalization.</p>
<i>Assistant Superintendent and Chief Information Officer, Division of Technology Services</i>	Ensure common teacher technology toolkits are in each D11 classroom.	The Classroom Technology Toolkit list has been finalized and shared with schools. We will continue to seek funding and sustainability to roll out in a consistent and equitable way.
<i>Director, Professional Development</i>	Build capacity of all instructional staff in technology skills.	Through the Professional Development Department, district employees can select to engage in over 25 technology classes per year including topics such as: Microsoft 1,2, and 3; Office 1,2, and 3; and EXCEL 1, 2, and 3. Tom Hunt offers several training dates per year instructing Office 365 and other Office 365 enrichment classes (SWAY).
<i>Director, Technology Services</i>	<p>Provide support to:</p> <p>Create technology-based student internships</p>	These internships are in place and ongoing in partnership with RJWAC staff. Some graduating students are now applying for LTT

<i>Responsible Party</i>	<i>Goals – Did we do?</i>	<i>Progress</i>
		job openings.
<p><i>Director, Professional Development</i></p> <p><i>Director, Learning Resource Services/Instructional Technology</i></p> <p><i>Library Technology Educators</i></p>	<p>Provide training for student and staff concerning the appropriate use of technology, including safety and privacy safeguards and protocols specifically the CIPA requirements of:</p> <ol style="list-style-type: none"> <li>1) appropriate online behavior,</li> <li>2) safety and privacy, and</li> <li>3) cyberbullying.</li> </ol>	<p>The Professional Development Department maintains an online platform (Hoonuit) providing access to training for staff (both self-selected participation and required participation based on district position) concerning safety &amp; privacy safeguards and protocols identified by CIPA and including FERPA, COPPA, SDTSA, and basic Do's and Don'ts of Student Data Privacy.</p> <p>LRS ensures that LTEs are trained in CIPA requirements using I-Safe and Common Sense Media curriculums.</p>
<p><i>Executive Director, EDSS</i></p> <p><i>Coordinator of Enrollment</i></p> <p><i>Director, Assessment</i></p>	<p>Provide professional development on:</p> <p>student info reporting and data management</p> <p>data driven dialogue</p> <p>assessment for learning</p>	<p>EDSS facilitates data driven dialogue focused on state assessments and/or district benchmarks. Through this process, participants and Professional Learning Community (PLC) teams explore data, analyze student performance on learning standards and generate action plans to address areas of concern.</p> <p>EDSS facilitates teachers and PLC teams in processes to create short formative assessments for monitoring student learning of state standards. Using these assessments for learning, PLC teams use protocols to analyze results through continued data dialogue.</p>
<p><i>Library Technology Facilitator/District Technology Coordinator</i></p>	<p>Provide professional development on:</p> <p>Technology support for multiple online assessments</p>	<p>Implemented and ongoing</p>

<i>Responsible Party</i>	<i>Goals – Did we do?</i>	<i>Progress</i>
<i>Technology Assessment TOSA</i>		
<i>Director, Learning Resource Services/Instructional Technology  Library Technology Facilitator/District Technology Coordinator</i>	Provide professional development on:  Technology integration for Next Generation Learning  Blended learning models to leverage 1:1 environments	Implemented through monthly LTE and LTT meetings
<i>Director, Career and Technical Education</i>	Provide professional development on:  ICAP student portfolio	ICAP: NAVIANCE implementation in 17-18 district wide in high schools allows for student tracking of ICAP.
<i>Next Generation Learning Coordinator</i>	Provide professional development on:  Next Generation Learning  Student portfolio development  Blended learning models to leverage 1:1 environments	<ul style="list-style-type: none"> <li>• Established a blended learning model for Next Generation Learning knowledge building and close coaching through Schoology pathways and face-to-face engagements. Topics include an introduction to personalized learning, competency-based systems, blended learning, project-based approaches, human centered design thinking, and learning environment development.</li> <li>• Student portfolio development and presentations of learning to support is underway as</li> </ul>

<i>Responsible Party</i>	<i>Goals – Did we do?</i>	<i>Progress</i>
		<p>of 2018.</p> <ul style="list-style-type: none"> <li>Blended learning professional development occurs in the specific context of each classroom and/or school regardless of device ratios. Only one Next Generation Learning School is 1:1.</li> </ul>
<p><i>Director of Records</i></p> <p><i>Assistant Superintendent and Chief Information Officer, Division of Technology Services</i></p>	<p>Provide annual notice to parents and legal guardians concerning the type of data transferred to cloud computing service providers.</p>	<p>Notice given every August, and with out-of-district students enrolling mid-year in the district.</p>
<p><i>Director of Records</i></p>	<p>Facilitate policy adoption addressing Student Data and Transparency and Security Act</p>	<p>Adopted in October 2017</p>
<p><i>Assistant Superintendent and Chief Information Officer, Division of Technology Services</i></p>	<p>Provide notice to the parent of legal guardian if there is a security breach or other unauthorized disclosure of his or her child’s information.</p>	<p>Implemented and ongoing</p>

### TECHNOLOGY ASSETS

District 11 has a variety of technologies to support teaching and learning. Below is a snapshot of types and approximate numbers of technology from reports pulled from PeopleSoft Finance and Configuration Manager.

These numbers can be broken down to approximately:

<b>Devices</b>	<b>July 2015 report</b>	<b>April 2018 report</b>
<b>Desktops</b>	8366	10886
<b>Laptops</b>	7024	10973
<b>ipads</b>	1855	5980
<b>Learnpads</b>	137	147
<b>Chromebooks</b>	276	1090
<b>TOTAL DEVICES</b>	<b>17658</b>	<b>29076</b>

A couple of additional technologies are below:

<b>Projectors</b>	<b>1909</b>	<b>1827</b>
<b>Document cameras</b>	1040	1050