

District Plan for Technology Integration

Containing Preliminary Smart Schools Investment Plan Proposals

within 3 school years

(2015-2016 through 2017-2018)

**Marathon Central School District
P.O. Box 339 - 1 E. Main Street
Marathon, NY 13803**

Tech Planning Timeframe: Spring 2016
Plan Approved Date:

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INTRODUCTION

There is a constant endeavor to work smarter in the world and to that purpose school districts must keep current with the best and yet most practical ways to educate our future leaders whom now sit in classrooms across the nation and are expected to meet higher levels of knowledge and reasoning. To that end, the Marathon Central School District administration team and the technology coordinator partake in regular meetings to discuss how the district may improve upon technology in and out of the classroom so that our students may learn and achieve at a faster pace. Due to the many expectations of the teaching staff we must provide efficient tools to stay current with the school year subject goals. Modern computing allows us to make great strides forward with less effort and time spent dealing with all the requirements of educating children and to ultimately do this job properly.

The modern work force expects graduates to be ready for the tasks that are also necessary in today's world and we expect from ourselves to make sure our kids will integrate into the world with successes that exceeds our own. It is no small task to develop the many facets of our children's mind and produce an acceptable member of society that will mature into an adult whom will contribute to the betterment of all our lives combined.

GOALS AND STRATEGIES

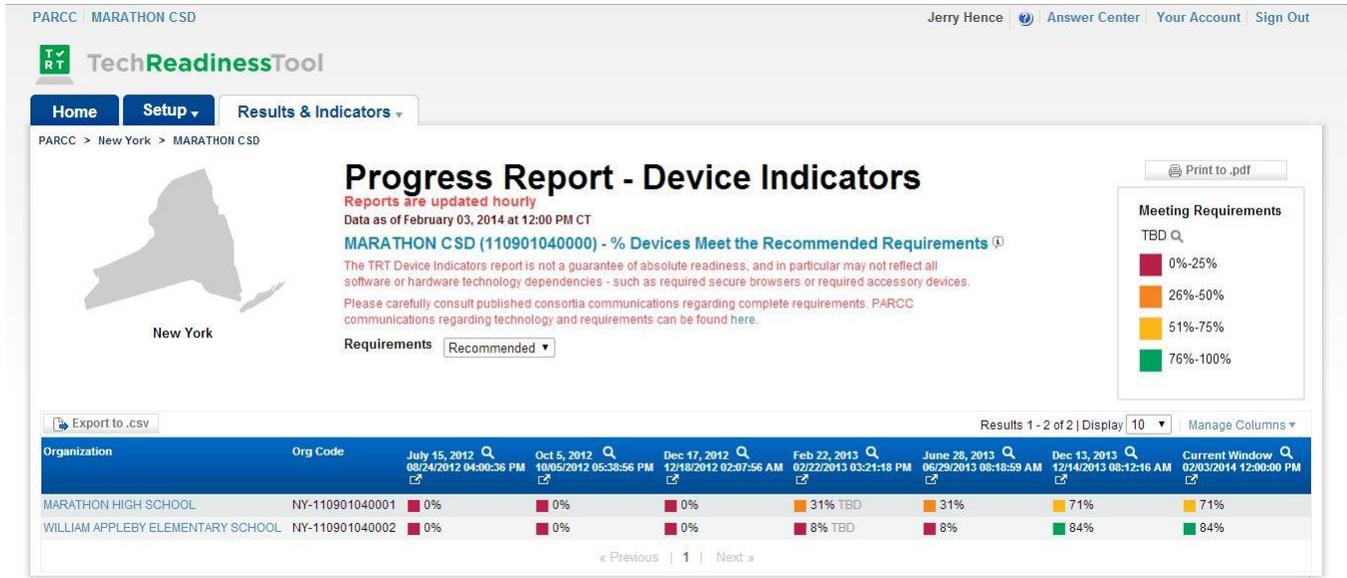
Marathon Central School District will embark on a three year strategy to supply appropriate access to the technological tools and devices required by the staff and the students in order to meet the demands of common core, our local technology program, online state assessment, professional development, special education needs, and various other important educational endeavors. In this plan we will also place emphasis on our newly created district strategic plan whose mission is to "Embrace, Educate, and Empower". The following technology goals are identified by the district:

- Goal #1 - Upgrade aging computer equipment and provide more access to the individual.
- Goal #2 – Create a computer equipment rotation schedule that provides the technology needed for 21st century learning.
- Goal #3 - Upgrade and maintain the current infrastructure and improve upon the wireless systems.
- Goal #4 - Implement storage strategies that will support the demands of video file sharing.
- Goal #5 - Train staff on the usage of the current OS, cloud collaboration, new applications, and file sharing techniques.
- Goal #6 - Increase the quantity of front of the class interactive boards and provide professional development to increase instructor effectiveness.
- Goal #7 – Continue to implement and upgrade security systems to provide a safer learning environment.
- Goal #8 - Upgrade and maintain core software packages that provide the teacher and the student with up-to-date tools to complete the 21st century demands.
- Goal #9 - Upgrade current cart projectors systems in classrooms to fully integrated and ceiling mounted systems.
- Goal #10 – Maintain an understanding of technology gaps between the classroom and life outside of school by interviewing the businesses, staff and students to determine what would best tie in the curriculum achievements to hardware and software.
- Goal #11 - Implement and utilize student collaboration tools including Google Drive, Google Calendar and G-mail.
- Goal #12 - Implement technology notification systems with consistency that will address communication gaps with staff and students.
- Goal #13 - Upgrade and maintain more reliable printing in district.
- Goal #14 - Establish take home technology that will improve out of school learning.
- Goal #15 - Determine the effectiveness of internet access on school bus rides and implement access where viable and practical.

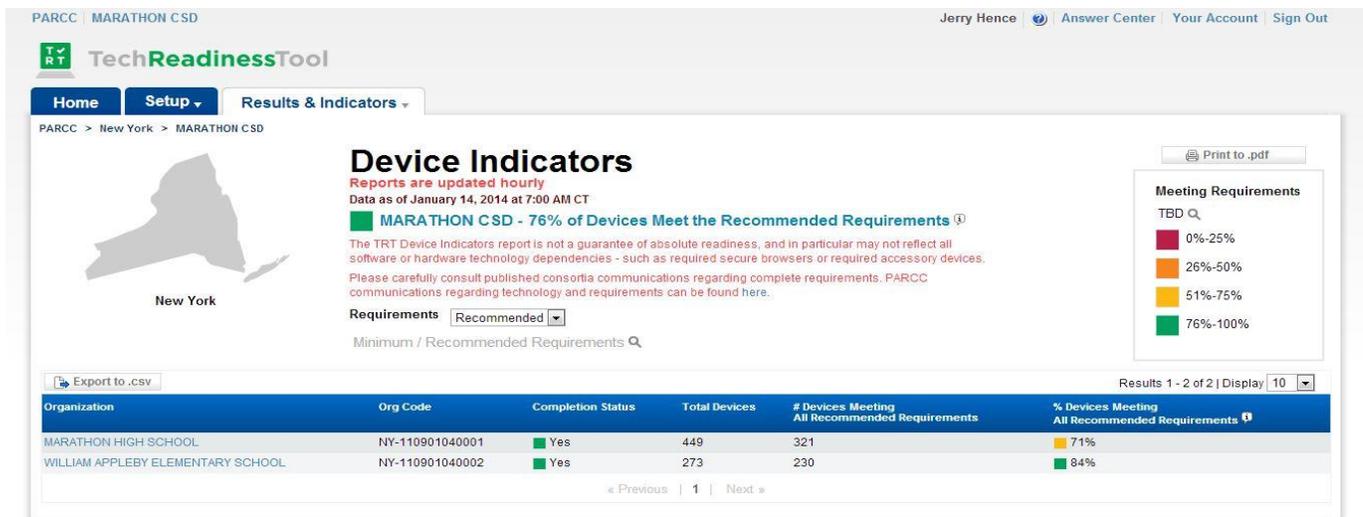
COMPUTER BASED TESTING READINESS

This technology plan is to assess the existing technology within the Marathon School District and to make financial commitments to keep the current implementations of technology alive and well. Many factors contribute to the technology needs of the district, but recently the notion of CBT (Computer Based Testing) and PARCC (Partnership for Assessment of Readiness for College and Careers or other state approved computer based testing technology) have been the major driving force for our technology preparedness. MSD has upgraded all of the computer assets to Windows 7 Pro, which is the most important recommended requirement of CBT. Also, 200 new laptops were purchased to add to the growing quantity of mobile laptop carts.

The Progress Report shows that we established a 40% increase in tech readiness at the Marathon Junior/Senior High School and a 76% increase at the Appleby Elementary School over the summer of 2013.



The Device Indicators report shows that, at the time, we had a total of 722 computers at our schools and of those devices we can see the broken down assessment of tech readiness per building.



The Overall Readiness Indicators report shows that Marathon CSD is currently well prepared for tech readiness.

PARCC | MARATHON CSD Jerry Hencce | Answer Center | Your Account | Sign Out

TechReadinessTool

Home Setup Results & Indicators

PARCC > New York > MARATHON CSD

Overall Readiness Indicators

Reports are updated hourly
Data as of January 14, 2014 at 7:00 AM CT

The TRT Overall Readiness Indicators report is not a guarantee of absolute readiness, and in particular may not reflect all software or hardware technology dependencies - such as required secure browsers, required accessory devices, or bandwidth constraints.

Please carefully consult published consortia communications regarding complete requirements. PARCC communications regarding technology and requirements can be found here.

Requirements: **Recommended**

Minimum / Recommended Requirements

Print to .pdf

Percent Coverage
TBD

- 0%-25%
- 26%-50%
- 51%-75%
- 76%-100%

Export to .csv

Results 1 - 2 of 2 | Display 10

Organization	Org Code	Completion Status	% Devices Meeting Recommended Requirements	% of Device to Test-Taker Readiness of the School	% of Network Readiness of the School	More Constrained By
MARATHON HIGH SCHOOL	NY-110901040001	Yes	71%	>100%	>100%	Both Equally
WILLIAM APPLEBY ELEMENTARY SCHOOL	NY-110901040002	Yes	84%	>100%	>100%	Both Equally

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PARCC technology readiness tries hard to establish the thought processes to evaluate your existing access to computers for that ultimate test day, but it also seeks out other contributing factors that will need to be addressed to assure a smooth transition into online testing for our students. Factors, such as, the available Internet bandwidth, a proper network infrastructure, and the technology training for teachers administering the test.

CURRENT TECHNOLOGY ASSESSMENT

The following six categories are establish criteria under the BEDS system and since we have to report our technology this way each fall, we strive to represent our data to this standard format. As a matter of fact, we are implementing the BEDS standards into our existing inventory database for quick and easy reporting to the state.

[Basic Educational Data System](#) (BEDS-October 2014)

System for collecting district/school student enrollment and staff counts.

1. Number of Computers in Classrooms or science labs
2. Number of Computers in Computer technology labs
3. Number of Computers in Library/Media centers
4. Number of Computers in Administrative or PPS offices and other non-instructional areas
5. Number of Computers in Mobile computer labs
6. Number of Computers in Total Computers, all area

	BEDS 1	BEDS 2	BEDS 3	BEDS 4	BEDS 5	BEDS 6
ES	102	26	3	9	173	313
HS	123	45	22	31	220	441
						754

QUICK LOOK AT COMPUTER RESOURCES AND LOCATIONS

MCSD consist of two buildings: The following resources are designated for students, not staff. All faculty and administrative staff are equipped with either a laptop or a desktop.

Marathon Central Jr/Sr High School (36 Classrooms - 323 students)

- Library **Laptop Cart** (17 Laptops)
- Collaboration Room **Laptop Cart** (25 Surface 3's)
- Rm 101 Science **Classroom Lab** (12 Desktops)
- Rm 102 Resource Room **Classroom** (1 Desktop)
- Rm 104 English 7 / Science 7 / History 7 **Laptop Cart** (25 Laptops)
- Rm 105 Math **Classroom** (1 Desktop)
- Rm 106 Music **Classroom** (2 Desktops)
- Rm 108 Digital Photography **Classroom** (3 Desktops)
- Rm 109 Art **Classroom** (4 Surface Pro 4's and 1 Desktop)
- Rm 110 Family Resource Center **Classroom** (3 Desktop)
- Rm 111 Home Economics / ISS **Classroom** (6 Laptops)
- Rm 202 Read 180 **Classroom** (7 Desktops)
- Rm 203 Science **Classroom Lab** (12 Desktops)
- Rm 204 Technology Curriculum **Classroom Lab** (24 Towers)
- Rm 205 English 8 **Laptop Cart** (25 Laptops)
- Rm 206 Spanish **Laptop Cart** (25 Laptops)
- Rm 207 Math 8 **Classroom** (2 Desktops)
- Rm 208 Science **Laptop Cart** (25 Laptops)
- Rm 209 Business Curriculum **Classroom Lab** (20 Towers)
- Rm 210 History 8 / American History **Laptop Cart** (24 Laptops)
- Rm 212 History **Laptop Cart** & **Classroom** (24 Netbooks & 1 Desktop)
- Rm 215 Guidance Room **Classroom** (2 Laptops)
- Rm 216 English 11 **Laptop Cart** (25 Laptops)
- Rm 217 Global Studies / Economics **Laptop Cart** & **Classroom** (26 Laptops & 1 Desktop)
- Rm 219 Math **Classroom** (1 Desktop)
- Rm 220 Resource Room **Classroom** (5 Desktops)
- Rm 221 Resource Room **Classroom** (3 Desktops)
- Rm 223 English 10 **Laptop Cart** (25 Laptops)
- Rm 225 English 9 & 12 **Laptop Cart** (24 Laptops)
- Rm 227 Resource Room **Classroom** (4 Desktops)
- x32 SMARTboard **Classroom**
- x25 Document Camera and Projector **Classroom**

Appleby Elementary School (43 classrooms – 380 students)

- Library **Classroom** (2 Desktops)
- Technology **Classroom Lab** (25 Desktops)
- Grade 6 **x3 Laptop Cart** (75 Laptops)
- Grade 5 **Laptop Cart** (25 Laptops)
- Grade 4 **Laptop Cart** (25 Laptops)
- Grade 3 **Laptop Cart** (25 Laptops)
- Grade 2 **Laptop Cart** (25 Laptops)
- Read 180 **Classroom** (6 Desktops)
- PTO **iPad Cart** (23 iPads)
- Rm 203 Resource Room **Classroom** (6 Laptops)
- Rm 305 Resource Room **Classroom** (4 Laptops)
- Rm 401 Resource Room **Classroom** (5 Laptops and 1 Desktop)
- Rm 408 Resource Room **Classroom** (3 Laptops)
- Grades UPK – 2nd **Classroom** (3/4 Laptops per room)
- x34 SMARTboard **Classroom**
- x35 Document Camera and Projector **Classroom**

Year	SMARTboards	Epson Interactive Projectors	ELMOs	LadyBug	HoverCams	Projectors	Promethean TV
Total	X66	x3	x45	x3	x10	x63	
2004			x18			x10	
2005						x4	
2006	x1		x4			x16	
2007			x7			x10	
2008	x2		x7			x7	
2009	x11		x7			x11	
2010			x2			x3	
2011		x1		x3		x1	
2012	x7	x1			x5	x1	
2013	x2	x1			x2		
2014	x10				x3		
2015	x30				x2	x28 out	x2
2016							

Year	Printers							
Total	x17	x13	x7	x5	x3	x6	x6	x6
Pre2005	LJ 4050N	930C Ink	LJ 1200N	6122 Ink	CLJ 4600 N	LJ 4200N		
2005	6	5	3	3	3	1	CLJ 3700N	LJ 1022N
2006	7	6	4	4	4	2	1	1
2007	8	7	5	5	5	3	2	2
2008	9	8	6	6	6	4	3	3
2009	10	9	7	7	7	5	4	4
2010	11	10	8	8	8	6	5	5
2011	12	11	9	9	9	7	6	6
2012	13	12	10	10	10	8	7	7
2013	14	13	11	11	11	9	8	8
2014	15	out	x1 out	out	12	10	9	x4 out
2015	x6 out		x4 out		out		x1 out	
2016								

Year	Printers							
Total	x1	x7	x1	x3	x2	x3	x9	x1
2007	Epson 4800Pro	CLJ 2600N						
2008	1	1	LJ 4240N					
2009	2	2	1	CLJ CP3525N				
2010	3	3	2	1	LJ P4015N	LJ P2055DN		
2011	4	4	3	2	1	1		
2012	5	5	4	3	2	2	Pro P1606DN	
2013	6	6	5	4	3	3	1	CLJ CP4525N
2014	7	7	6	5	4	4	2	1
2015	8	8	7	6	5	5	3	2
2016								

Year	Printers					
	P3015N	CP5220N	M476DN	M452DN	M402DW	
2015	x15	x1	x1	x1	x1	
2016						

HARDWARE LIFE SPANS

This section takes a look at what technologies we currently have and what amount of money we expect to spend over the next 3 years in order to maintain and continue upon the purchasing path to support these already committed integrations.

Servers - Our typical server life span has been up to a decade long, although that life span is not advised as life spans of around 4-5 years is more apt to be the industry standard. The accepted practice regarding servers is to carefully balance the number of servers to the number of systems they would serve. For instance, it would not be prudent to place all your systems onto one server, even with the advent of virtualization, because this would cripple the district if that one machine were ever to fail. It has been with this interest in mind that MCSD has rolled out two core servers to manage user file and print serving, one at each building, and to deploy a few separate utility servers wherever needed to house enterprise antivirus, imaging, heating control, and specialty academic software like Read 180. Since our onsite server count is low, and many of our new system servers are actually housed and maintained by our local Regional Information Center (RIC), we can say that virtual servers are not really necessary. A few years ago, the district moved away from Novell Netware and Groupwise email in order to pursue Microsoft Active Directory locally and email servers based in the cloud. This move has allowed us to implement new strategies such as email archival, student informational databases, and Internet filtering with far more ease of deployment than would have been allowed with Novell. At the time, these Novell servers were going on 7 years old and an upgrade and/or change was needed. In this case, it was the current access to staff with Microsoft expertise as well as training possibilities that determined what networking system MCSD needed in place.

In 2015, the existing core server file storage dedicated to staff and students has been upgraded 4 TB and backup systems have been increased along with this change to support the necessary storage requirements. In the pursuit of security and computer based testing, 5 more servers have been purchased and brought online to manage 40+ cameras, 80+ VOIP telephones, and 80+ wireless access points. It is expected that by the end of this tech plan cycle the MCSD will need to deploy 2 new core servers and this investment will be estimated at \$8,000.

PCs and Laptops – Since 2006 (please refer to the hardware aging charts above), MCSD has 196 Desktops and 757 Laptops totaling 953 resources used by approximately 85 staff members and 750 students. Of these resources, 14% have been retired, 39% are less than 3 years old, and 47% will need to be retired within the next 2 years. If Marathon Jr/Sr High School (Grades 7-12) takes on a 1:1 initiative to provide a computer to each of the 320 students, then older assets in the fleet can be retired and remaining laptops carts can slowly fade away to only shell charging stations for the student laptop charging needs. It is the intent of this current technology plan to shift these assets around, retire the needed 47%, and enact a 7-12 grade 1:1 initiative with Windows 8 devices that will both meet the teacher's and the student's needs for the next 5-7 years. This investment will be estimated at \$200,000.

SMARTboard Systems – MCSD currently has 66 SMARTboards installed out of 80 available classrooms spaces. This leaves up to 14 classrooms that still need SMARTboards (\$3,000 each). This is substantial commitment to one brand. About half of this product was purchased in 2015. 14 of the older units are susceptible to a design flaw that requires a \$600 repair cost. It can be expected that by the end of 2016, we will have to spend \$8400 into repairing these projectors, and thus extending their life span to 10 years and perhaps beyond. Replacement bulbs are considered in our annual state hardware budget and run about \$180 each. The pedagogic approach to displaying interactive content at the front of the classroom is considered one of the major technology roll-outs that schools have taken in recent years. Since having established 66 SMARTboards systems in a majority of district classrooms, it is the intent of this current technology plan to continue purchasing and/or upgrading this product for years to come. In addition, 66 ASUS computers (64 bit, windows 8.1) will be purchased. These are small computers which will be mounted to the wall and will allow anyone with room access to operate the SMARTboard. A wireless keyboard and mouse will be part of this system. This investment will be estimated at \$39,600.

Documents Cameras and Peripherals – 90% of the document cameras are out of warranty and their life span seems to be about 4-6 years as we have seen 8 become non-repairable in the last 5 years. The document camera of choice has switched from the ELMO TT-01 model, which is definitely the model that fails most often, to a HoverCam TS model that has yet to show any sign of failure and it is half the cost of the predecessor. Taking into consideration the failing TT-01 models and that the original ELMO models are getting to be over a decade old, it is very probably that we will need to replace 12% of our document cameras in the next 3 years for a cost of \$1872. Additionally we will continue to add

document cameras to locations that do not already have one in the attempt to outfit the remainder of the classrooms thereby spending another \$2000-\$3000 on new technology integrations. More concerning is the onset of very old printer technology and the district is currently faced with replacing the 72% of our printers that are 10 years old or older. The majority of these are Hewlett Packard model 4050n printers that are 16 years old. It is the intent of this current technology plan to purchase 10-20 document cameras and 20 printers over the course of the next 3 years and that investment is estimated to be close to \$15,000.

SMART SCHOOLS INVESTMENTS PLAN PROPOSALS

Wireless system

Since 2006, the technology department has installed and maintained wireless access points that are not centrally controlled and pose significant discontinuity between designated geographical zones within the buildings. This system, which is very economical has suited us for a decade, but we now are faced with needs to establish faster connections for the increased usage of mobile devices within the district as well as prepare for the eventual rollout of computer based testing with mass numbers of students via these same wireless connected devices. MCSD needs to implement an 802.11ac wireless system that is centrally managed and will handle the connection load to which we are rising to. In the 2015 capital project MCSD has arranged for the wiring necessary to connect a robust wireless system that has building level redundancy and meets the most recent specifications for wireless communication. One server and two controllers have been installed into the infrastructure to support a wireless access point in each classroom. Over 80 access points have been installed to address full coverage with the district. It is very probable that a good percent of hardwired devices like printers and desktop PCs will also begin to transfer over to 100% wireless installations so as to relive any restrictions on physical location. There are currently wired network jacks in the libraries and the tech labs that have been problematic in the past which may be remedied by wireless connectivity, now that we are progressing with a robust wireless solution. Also, the implementation of a "Guest" network will give our district a safe work zone for students to use their own personal laptops. This concept may now be looked at to take advantage of the cost savings of BYOD while maintaining a safe network for our students and visitors.

1:1 Computing including Faculty

Currently most staff have access to an assigned laptop for use at school and at home. This plan would ensure all staff have access to up to date technology that could be at their disposal 24/7. Through the Smart Schools initiative, we plan to provide students with increased access at school with one to one computing (Grades 5-12) and home (9th-12th). Many of our students have access to the internet. The plan would need to ensure that students would only be able to access internet content through our filter. Some students do not have access to the internet or have limited data availability. The laptops and Surface 3's have the ability to sync with school folders. Students would be able to sync prior to leaving school and have access to all content needed to complete their work at home. Content would also be available via our web page for those that have adequate internet access. We have very limited locations in our district where students could use technology outside of school hours. We are trying to extend access to our building, providing a supervised location where students could use technology and complete assignments. We would also like to implement broadband in school buses to extend internet access to student traveling to and from school as well as those going to events outside of the school district.

Electronic Text books

At the high school, classes that are currently using e-books include technology, social studies, 7th grade math and ELA (modules) and 9-12th grade science. Based on a recent survey, 16 other teachers are interested in seeking e-book resources and/or are willing to try them. 8 teachers are not interested in utilizing e-books. Most that are not interested do not have regularly assigned textbooks or use multiple books to teach content.

Mounted Projection Systems

Marathon has over the course of a decade assembled many push carts that provide a mobile document camera and projector to the teacher. It was an economical way of getting projection technology into educators who needed very much to display worksheets and computer documents to the front of the class. Initially there were few carts and they had to be mobile so that staff could share the resources. This cart system came with several flaws. First, the instructor could never stand in front of the cart and face the entire class without blocking the projection and if they stood to the side of the cart, then their back would be to half the class. The second flaw is that when the cart stands close to 4 feet tall, with the document camera towering on the cart's topside, then this tends to get in the way and the viewing angles

are not all that great for the students. Last of all, the cart would produce tripping hazards for the staff and students when power cables needed to reach the wall outlets and these cables also make for a very untidy appearance, to say nothing about the fact that it is not really a true turnkey solution. In some cases, staff had to unplug their monitors from their LCD displays and attach the cables to the backside of the PC for presenting material from the computer. Teachers need a solution that they can just turn on and have all the technical issues of the presentation be non-existent. That solution for MCSD has become the SMARTboard installation, which when enhanced with a wall mounted PC, will accommodate proper front of the classroom instruction while providing standard tools to the teaching staff that are being shared with yearly newcomers. There are many benefits we see from engaging devices, but it is important to clarify that the content displayed onto the wall far exceeds what one may draw on a whiteboard or with chalk. With proper preparation, time restraints have been reduced significantly and accessibility to the world's information is at the instructor's fingertips. This alone is reason enough to continue down this path without even factoring in the effects of student engagement in group participation.

Media Rich Learning Environments

Teachers in both buildings currently use many electronic tools to enhance learning in addition to traditional books and pen/paper tasks. Software currently being used includes: Edmodo, Google Docs, Quia, YouTube, Microsoft programs, Smart Notebook, Google Earth, Paint, School Vue, a variety of web browsers, Renaissance Learning, Read 180, STAR, Froguts.com, Photoshop, Auto desk, Inventor/CAD, IXL, Windows media player, Movie Maker, Skype, AIMS Web, Wacam, Bamboo, Logger Pro, Web Assign and Exam Gen. Programs that teachers have expressed an interest in and would like access to/professional development in include: Adobe Premier, iMovie, video editing software, nutrition/fitness activity trackers and programming, Quia, Edmodo, on line quiz platforms, Gizmo, Web Paint, Bridge Builder, e-books, Google Calendar, Word Press, Photoshop, Yearbook Avenue, keyboarding programs for younger students (2nd and 3rd grade), on-line discussion forums, on-line editing, Geogebra, IXL, Animation, Brain X, 3-d math interactive programs and Finale.

80 % of the teachers surveyed expressed a desire to try/use Google Calendar for student assignments in place of a paper bound agenda. 97% of students surveyed (7-12) expressed an interest in using Google calendar instead of traditional agendas.

Electronic Storage Systems

There is always going to be a need for more storage space due to the evolving nature of computer applications. In the pursuit of video learning environments, this storage capacity is extremely demanding and new systems will need to be implemented to allow for this endeavor. With the popularity of YouTube and other Internet video websites, it has become the modern day "go-to" of how to learn something you need to know. It is the intent of this tech plan to start introducing capable system storage to support video learning, and platforms to which staff and students may quickly address and recall information in efficiently and effectively. Integrating video into the classroom first requires a proficient mechanism which will appeal to the teachers and students, and that system will need to be organized and addressable by its user base. So, it is necessary to equip students with camera capable devices and appropriate software to edit and finalize video projects. Time and effort must go into providing access to appropriate web resources and professional training will need to take place among the staff. As of early 2015, the file storage has been increased by 1000%, but we now need to look at an initiative to begin using it for video.

Updated Technology Labs

The technology labs in district are typically updated more frequently than the mobile laptop carts, and those assets are not disposed of but rather shifted to staff and faculty rooms where desktops are needed. This allows for the latest technology in the rooms where we actually push technology curriculum. Due to the manner in which we deploy 7th and 8th grade computers, we may find it easier to simply fill the tech lab rooms with PCs that are not related in any way to the 1:1 investments and retain labs that function independently. In the upcoming 3 years both tech labs at the high school will need to be upgraded to 64 bit operating systems workstations. This investment will be around \$25,000 per room. The elementary school tech lab should be able to last until the next 3 year cycle as it has much newer PCs (model 8300).

Anti Bullying Home Use Keylogger

The technology to log student typing at home is available if we invest into the latest Aristotle unit. This cost is quoted at \$5,727.56

IMPLEMENTATION

Instructional Technology Plan Implementation

Starting in 2015, the district has already made financial commitments to install category 6A cable through the capital project to be in every classroom configured for first use as of October. This project will also provide the management systems, access points, and POE L2 switches necessary to provide a robust wireless network solution.

Dates	Actions	Desired Outcomes
Spring 2016	Develop policies and regulations for one to one computing	Would provide clear guidelines for use of new technology and consequences for misuse.
Spring 2016	Implement Internet filters for school and home Student/parent contracts for usage – Contracts, AUP, insurance options for parents	Provide a safe technological learning environment on and off school grounds.
Fall 2015 Spring 2016	Deploy staff hardware: Addition of SMARTboards for all academic areas Surface Pro's/Laptops for all staff members which will mirror student technology Add small computers to all SMARTboards in conjunction with wireless keyboards and a wireless mouse.	Provide teachers with access to hardware which is consistent between classrooms and buildings.
2015, 2016, 2017	Training Summer, afterschool and off site trainings Examples of training include: SMARTboards for ES and HS, use of Google Docs, use of Surface 3's and Windows 10, use of digital textbooks, etc.	Provide teachers with professional development to understand and feel comfortable with new technology. Provide opportunities for staff to work together to develop classroom protocols and delivery methods.
Fall 2015 Fall 2016 Fall 2016 Fall 2017	Implement hybrid 1:1 6 th grade will have a cart of 25 Lenovo Laptops established for each classroom 7 th and 8 th will have the same as 6 th grade, but will be allowed to sign these laptops out for home use on special projects throughout the school year with parent permission 9 th – 12 th grade will have Surface 3 tablet computers for full time usage. Grade 10 may begin take home privileges as of Jan 1 st , 2017 (mid-year). 11 th and 12 th grade may begin take home privileges at the beginning of the school year. Use of Goggle docs and google calendar in place of agenda's Possible – 8 th grade lap tops shifted to 5 th grade for in school	Systematically provide students with access to hardware and consistent instruction on how to use and learn through technology.

	one to one. 8 th grade would be issued Surface 3.	
2016-2019	<p>Site Based Support</p> <p>Student trained to run help desk – enroll in independent study course title College and Career Readiness – PCCare (class time – every other day? House in library?)</p> <p>Library media specialist becomes “best practices for integrating technology applications”</p>	Provide students with leadership opportunities and provide students and staff with technological assistance.
Ongoing	<p>Curriculum: 2020 vision – redesigning curriculum to leverage technology in the hands of students</p> <p>Explore and implement on-line textbooks and e-books</p> <p>Use of digital collaboration and digital presentations</p>	To develop appropriate and innovation instruction for students using technology.
<p>Fall 2016</p> <p>Spring 2016</p> <p>Fall 2017</p>	<p>Adding in Broadband on school buses:</p> <p>1-5 buses</p> <p>5 more buses</p> <p>Remaining fleet</p>	Provide access to students beyond the school walls in an environment where many students are required to be.

PROPOSED BUDGET

Year	Items	Projected Costs
2017-2018	Core Servers	\$8,000
2016-2018	7-12 one to one computers for students	\$200,000
2016-2018	Protection and labeling for one to one computers	\$20,000
2016	30 Surface Pro 4 for staff	\$30,000
2016-2017	Additional SMARTboards installed (up to 14 locations @ \$3,000) as well as repair to older units	\$50,400
2016-2018	66 ASUS computers for SMARTboards, wireless keyboard and mouse	\$39,600
2016-2018	10-20 document cameras and 20 printers	\$16,872
2015-2018	Software programs for students and staff	\$20,000
2015-2018	Devices to accompany computers like headphones, cameras, scanners, electronic lab equipment. Etc.	\$10,000
2016-2018	E-book licenses	\$10,000
2016-2018	Hardware and data for bus internet connections	\$20,000
2016-2017	HS Computer lab upgrades	\$50,000
2016-2018	Key stroke logging software for all computers including ones that go home	\$12,000
	Total	\$490,872

EVALUATION

Strategies to Evaluate the Effectiveness of Technology Planning and Improved Teaching and Learning.

The district relies on the administration team and support staff to provide check and balances to exactly how effective our technology planning is and to what extent does it improve upon the methods and pedagogies of teacher and learning. Some of the methods of evaluation are listed, but not limited to:

1. Continual discussion regarding the current and future technology implementations are addressed throughout the year in the bi-monthly administration meetings which include the superintendent, the building principals, the chief financial manager, the technology coordinator, and the training administrator. The sole outcome is to hash out proposed technology implementations as to the effectiveness and usefulness to the organization.
2. The district typically addresses the staff at the onset of each school year (usually the first week in September) to survey the teachers as to what they have concerns about. This includes all technological endeavors and newly rolled out platforms and/or expectations. During the school year, on the first week of June, the district plans on administering a survey that asks teachers how technology can assist or improve upon the teaching and learning environment.
3. The tech staff constantly monitors the usage of systems and devices rolled out to the teachers and students and then they realize potential improvements that can benefit these areas. This occurs almost on a daily basis.
4. The high school building principals constantly evaluates and discusses with the individual teacher any and all classroom progress and recommends technology or will hear feedback on what technology is needed. For each teacher this occurs multiple times each year and this process is in action almost on a weekly basis.
5. The district calls to forum all able and willing staff members to establish and maintain a working strategic plan as well as put into place the proper strategic task forces to ensure implementation success. These meetings are spread out across the school year and occur 6-10 times per year.
6. The district relies on consultants from the local OCM BOCES and various other supporting groups and forums that help guide us into best practice scenarios for technology in education. These meetings are at the superintendent and principle level as well as sometimes specially called out to supplement and focus directly with the district technology leaders.