ESSEX COUNTY VOCATIONAL TECHNICAL SCHOOLS

2016-19 Technology Planning

for

Digital Learning

"A Vocational Technical School District using Technology to Support an Inclusive e-Learning Community"

STAKEHOLDERS

Title	PRINT Name	Signature
Superintendent	James Rogerson	
Assistant Superintendent	Vicciana Carbonell	
Business Administrator	Bernetta Davis	
Director of Human Resources	Michael Venezia	
Director of Career Technical Education	John P. DoLan Jr	
Supervisor of Information Technology	MARTIN WILSON	
Supervisor of Program Accountability	BICKRAM SINGH	
Supervisor of Special Education	Michael Zelkowitz	
Principal	DGE DENIS JR	
Principal		
Supervisor of Guidance	Chetram Singh	
Teacher	Kevin Fremgen	

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* Cover Page Image Source: http://www.bia-sjsu.org/april-technology-industry-update/

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I. District Overview

The Essex County Vocational Technical Schools (ECVTS) District offers a full service program that has been recognized by such notable publications as US News & World Report, Business Week Magazine and School Matters Magazine for its outstanding academic performance. The district provides a college-preparatory academic program culminating in Advanced Placement coursework in addition to its Career and Technical Educational (CTE) focus to approximately 2,200 students. This secondary school district, one of the oldest and largest in the state, serves a diverse population of students with over 85% of the students identified as either African American or Hispanic. More than 85% of the student population is eligible for free or reduced lunch and over 90% are from school districts formerly known as Abbott Districts, among the lowest socioeconomic districts in New Jersey. The ECVTS educational programs meet the needs of regular education students, special education students, advanced learners, and English Language Learners. More than 80% of the ECVTS graduates pursue a postsecondary school education in a two or four-year college.

Vision

Our students become active learners, creative problem solvers, and effective and ethical leaders by emphasizing the interconnections among science, technology, literacy, engineering, mathematics, and the humanities through career and technical education, core academics foundation, citizenship, and entrepreneurship.

MISSION STATEMENT

ECVTS will prepare each student for lifelong learning and rewarding career options in a diverse and rapidly changing world.

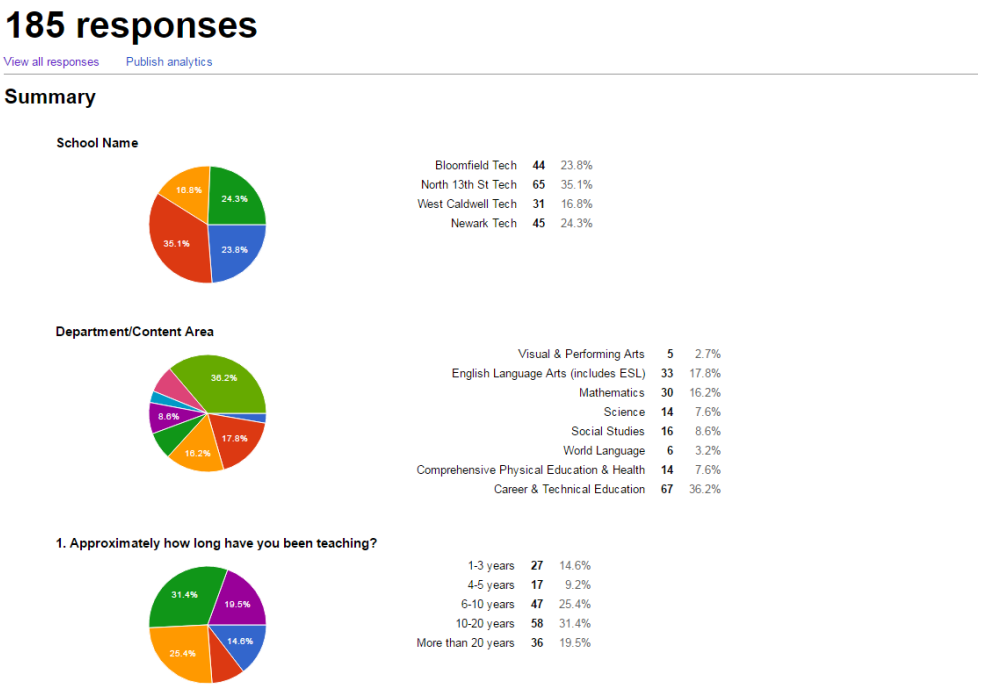
To achieve the mission, we will:

- Encourage academic, career-technical and social learning in all school endeavors.
- Provide students with sound learning resources and experiences coupled with a rich technology program.
- Increase student awareness of and preparedness for immediate and future entry into college, employment, technical schools, apprenticeships, or entrepreneurial ventures.
- Demonstrate consistent effort to help every student to attain and exceed NJ Student Learning Standards.

II. Needs Assessment

Two surveys were created, one for the teachers and one for the students, in order to inform the goals of the Technology Plan. The data collected generated information related to strengths, needs, and future resources and professional support.

Teachers:



Approximately 81% of the teachers in our district have expressed confidence in using the technology presently available to them. More specifically, software such as email, educational technologies, Microsoft Office tools, Google apps, and media center resources receiving the highest ratings. Similarly hardware such as desktops, laptops, smartboards, overhead projectors, scanners, document cameras, and digital/video cameras were also rated the highest in terms of use. Within these categories, the following areas were identified for further training:

- Creating Webquests and podcasts
- Using web based research tools, google docs, google drive
- Designing online assessments
- Evaluating online resources
- Using online collaboration environments

Students:

A total of 452 students completed the survey, with the majority enrolled in the 9th and 10th grade for the 2015-16 school year. Over 85% of the students confirmed having wireless internet access at home, whereas less than 5% expressed not having any internet access. The majority of the students also identified having desktops, laptops, mobile phones, iPads, and music devices that they could use at home and in school.

Social networks with the highest rating in terms of use included: Instagram, Snapchat, and Youtube. In order to learn more about a topic, the majority of the students mostly resorted to social media and search engines, and sometimes to books, school personnel, and/or family members.

Respondents also expressed using the classroom technology for conducting research and online document sharing (e.g. Dropbox, google docs, etc,). Areas rated the lowest included: 1. collaborating online with students from other schools, 2. Creating and publishing music, movies, webcasts, 3. Creating e-portfolios, 4. Creating and running animations and simulations, 5. Conducting online experiments and/or labs, and 6. Using apps.

III. Goals/Activities/Timelines/Evaluation

The Essex County Vocational Technical School District's Technology Plan for 2016-19 has been designed to serve as a significant map to guide technology initiatives in the immediate future. It will be used to augment the district's vision and mission, while simultaneously providing a focus to achieve district-wide technology goals. Technology is recognized as a vital component to the success of our school district's Learning, Management and Professional Development.

Goals/objectives/strategies

1. Learning: Invest in innovative technology tools that can serve to facilitate learning, develop soft skills, and check for understanding.
2. Management: Adopt technologies that enhance organizational efficiency.
3. Professional Learning: Provide targeted professional learning opportunities on the use of technologies to all of our stakeholders, including administrative leadership, teachers, support staff, and parents.
4. Policies and Procedures: Revise and educate the school community on the responsible and acceptable use of technology.

The district will continuously research and adopt technological solutions that support the learning environment within and beyond the classroom. All technology-based investments will be guided by projected expansions of our programs, best practices, research, and our

ability to respond to new technology demands in our rapidly changing global economic/educational/technological environment.

Goal 1: Invest in innovative technology tools that can serve to facilitate learning, develop soft skills, and check for understanding.

Time Frame	Description of Activities	Person(s) Responsible	Documentation
2016-17SY, 2017-18SY, 2018-19SY	Renew edConnect Learning Management System & train staff on lesson planning, data analysis, and assessment features and use	District Supervisors Directors Principals Teachers IT Personnel	Agendas Sign-In Sheets Invoices
2016-17SY, 2017-18SY, 2018-19SY	Purchase robots (Sphero SPRK), Z-Space Units, and drones to promote an engaging and interactive learning environment.	District Supervisors Directors Principals Teachers IT Personnel	Classroom Observations & Walkthroughs
2016-17SY, 2017-18SY, 2018-19SY	Upgrade/Replace outdated classroom and media center Technologies (SmartBoard, laptops, desktops, document cameras, etc.)	IT Department Directors District Supervisors Principals Teachers Media Center Specialists	Invoices
2016-17SY, 2017-18SY, 2018-19SY	Upgrade/Replace Moodle platform with a more effective/comprehensive LMS (e.g. Haiku, Canvas)	IT Department District Supervisors Principals	Classroom Observations & Walkthroughs
2017-18SY, 2018-19SY	Purchase Interactive Whiteboards, Holograms, and Interactive Touch Tables	IT Department Directors District Supervisors Principals	Invoices
2016-17SY, 2017-18SY, 2018-19SY	Renew subscriptions for Media Center Web based resources-Opals, Facts on File, Discovery Education, etc.	Principals Media Specialists Supervisor	Invoices Projects
2016-17SY, 2017-18SY, 2018-19SY	Renew READ 180/Math 180, Skills Tutor, Systems 44, Naviance, and Rosetta Stone licenses	Principals District Supervisors Guidance Counselors Teachers	Invoices Classroom Observations & Walkthroughs
2016-17SY, 2017-18SY, 2018-19SY	Purchase computerized assessments/resources: Accuplacer, WorkKeys,etc.	Directors District Supervisors Principals	Invoices Walkthroughs
2016-17SY, 2017-18SY, 2018-19SY	Purchase program specific resources for mathematics (TI-83+, Inspire, etc.) & renew digital books licenses (Pearson)	District Supervisors Principals	Invoices Classroom Observations & Walkthroughs
2016-17SY,	Purchase/Maintain program	Director	Invoices

2017-18SY, 2018-19SY	specific hardware for CTE such as digital cameras, Smart House electrical trainers, solar panel trainers, geo-thermal computerized equipment, 3D plotters, auto scanners, wheel alignment machines, computerized paint mixing machines, digital x-ray computerized systems, etc.	District Supervisors Principals	Classroom Observations & Walkthroughs
2016-17SY, 2017-18SY, 2018-19SY	Purchase/Renew program specific software for CTE such as Adobe Illustrator CS4, Adobe Photoshop, Quark Xpress, Director V 11.5 animation software, Apple Final Cut II film editing software, Cyber link Power Director video editing software, In Design CS4 Software, MAC Leopard V 10.5 software, adobe flash animation software, Creative suite 4 Web design software, Macromedia Dream weaver CS4 HTML Software, Paint Shop Pro software, Adobe Flash Pro Web Site Building software, Hunter Technology Wheel Alignment diagnostic software, Interactive Anatomy/Physiology Software, etc.	Director District Supervisors Principals	Invoices Classroom Observations & Walkthroughs
Resources: NCLB, RTTT3, IDEA, GenCyber, Pre-Apprentice, local, and/or Perkins grants.			
Evaluation: Evaluation data will be gathered through a number of sources including surveys, observations, walkthroughs, improved student performance, focus groups, feedback sessions, etc.			

Goal 2: Adopt technologies that enhance organizational efficiency.

Time Frame	Description of Activities	Person(s) Responsible	Documentation
2016-17SY, 2017-18SY, 2018-19SY	Renew edConnect Learning Management System	District Supervisors IT Personnel	Invoices Student & Teacher Accounts
2016-17SY, 2017-18SY, 2018-19SY	Purchase PowerSchool InfoSnap: Application and Registration Module	IT Department	Invoices Digital Applications

2016-17SY, 2017-18SY, 2018-19SY	Renew PowerSchool ISIS system contract	IT Department	Invoices Student & Teacher Accounts
2016-17SY, 2017-18SY, 2018-19SY	Renew EasyIEP license	Special Education	Invoices Student & Teacher Accounts
2016-17SY, 2017-18SY, 2018-19SY	Renew Systems 3000	Business Office	Invoices
2016-17SY, 2017-18SY, 2018-19SY	Renew Microsoft Office 365 & Web Help Desk licenses	IT Department	Invoices
2016-17SY, 2017-18SY, 2018-19SY	Renew AESOP online subscription	HR Department	Invoices
2016-17SY, 2017-18SY, 2018-19SY	Renew subscription for Safe Schools	HR & Business Office	Invoices Certificates of Completion
2016-17SY, 2017-18SY, 2018-19SY	Renew School Dude subscription	Maintenance Department	Invoices Work Orders
2017-18SY, 2018-19SY	Purchase Interactive Whiteboards, Holograms, and Interactive Touch Tables	IT Department District Supervisors Principals	Invoices Observations Walkthroughs
Resources: NCLB, RTTT3, IDEA, GenCyber, local, and/or Perkins Grant.			
Evaluation: Evaluation data will be gathered through a number of sources including surveys, feedback from reports submitted to local and state agencies.			

Goal 3: Provide targeted professional learning opportunities on the use of technologies to all of our stakeholders, including administrative leadership, teachers, support staff, and parents.

Time Frame	Description of Activities	Person(s) Responsible	Documentation
2016-17SY, 2017-18SY, 2018-19SY	Provide PD on using edConnect Lesson Plan, Assessments, and Reports modules	District Supervisors NJDOE ScIP	Agendas Sign-In Sheets
2016-17SY, 2017-18SY, 2018-19SY	Provide PD on using PowerSchool InfoSnap: Application and Registration Module	IT Department District Supervisors ScIP	Agendas Sign-In Sheets
2016-17SY, 2017-18SY, 2018-19SY	Provide PD on PowerSchool ISIS system contract	IT Department District Supervisors ScIP	Agendas Sign-In Sheets

2016-17SY, 2017-18SY, 2018-19SY	Provide PD to parents on PowerSchool Parent Portal & Naviance	IT Department District Supervisors ScIP Principals Guidance Parent Coordinator	Agendas Sign-In Sheets
2016-17SY, 2017-18SY, 2018-19SY	Schedule training for district on Safe Schools' modules	HR Department Business Office	Agendas Sign-In Sheets Certificates
2016-17SY, 2017-18SY, 2018-19SY	Provide training for staff on Teachscape	District Supervisors ScIP	Agendas Sign-In Sheets Certificates
2016-17SY, 2017-18SY, 2018-19SY	Provide training for staff on READ 180/Math 180, Skills Tutor, Naviance, and Rosetta Stone components	District Supervisors Principals Guidance ScIP	Agendas Sign-In Sheets Handouts
2016-17SY, 2017-18SY, 2018-19SY	Provide staggered professional learning in Google apps, evaluating online resources, using online collaborative platforms, design online assessments, webquests, and podcasts.	District Supervisors Principals Guidance ScIP	Agendas Sign-In Sheets Handouts
2016-17SY, 2017-18SY, 2018-19SY	Provide staggered professional learning in creating e-portfolios, creating and running animations and simulations, conducting online experiments and/or labs, and using apps.	District Supervisors Principals Guidance ScIP	Agendas Sign-In Sheets Handouts
Resources: NCLB, RTTT3, IDEA, GenCyber, local and/or Perkins grants.			
Evaluation: Evaluation data will be gathered through surveys, feedback from presenters and attendees, etc.			

Goal 4: Update and share the acceptable use of technology policies.

Essex County Technical Vocational School District cares about the safety and privacy of children online, and we comply with the Children's Online Privacy Protection Act of 1998 (COPPA). COPPA and its accompanying FTC regulations establish United States federal law that protects the privacy of children using the Internet. Though we make every effort to preserve user privacy, we may need to disclose personal information when required by law wherein we have a good-faith belief that such action is necessary to comply with an appropriate law enforcement investigation, current judicial proceeding, a court order or legal process served on our Web site. On certain Essextech.org web pages, "cookies" are used to help with interactive usage of the site.

(A cookie is a small file that a Web site transfers to your hard disk, usually to keep track of you while you are connected to that site.)

There are several policies that address the use of district owned technology as well as appropriate use and web based communication between staff and students. These are shared with the staff and students and posted on the district website.

3321- Acceptable Use of Computer Networks/Computers and Resources by Teaching Staff Members
4321- Acceptable Use of Computer Networks/Computers and Resources by Support Staff Members
3283 – Electronic Communications between Teaching Staff and Students
4283 – Electronic Communications between Support Staff and Students
5512 –Harassment, Intimidation, and Bullying (Cyber Bullying)

IV. CURRENT TECHNOLOGY NETWORKING & TELECOMMUNICATIONS EQUIPMENT

The following table describes the information currently implemented and used in the district:

School Location	Number of Devices	Internal Network Bandwidth	Internet Bandwidth
Bloomfield Tech	599	100Mbps – 1Gbps wired 54Mbps – 600Mbps wireless	200/200 Mbps
Newark Tech	982	100Mbps – 1Gbps wired 54Mbps – 600Mbps wireless	200/200 Mbps
North 13th Street	707	100Mbps – 1Gbps wired 54Mbps – 600Mbps wireless	200/200 Mbps
West Caldwell	577	100Mbps – 1Gbps wired 54Mbps – 600Mbps wireless	200/200 Mbps

The District has migrated many of its microcomputer applications to the Internet platform instead of running on the local machine. This new cloud-based environment makes it easier to maintain the most recent product versions provided by the vendor. Microsoft Office has evolved to the new Office365 product which allows the most popular desktop productivity software to be accessible over the Internet. The Google Docs has grown to a full blown suite with multiple applications used as a major platform for the classroom environment. Apple Macintosh platforms are now a viable alternative to the Microsoft platform as more

applications are accessible via the browser. The educational technologies are still accompanied with SmartBoards, document cameras, and webcams which have expanded the education beyond the conventional classrooms.

The district continues to evaluate and observe the benefits of the different classroom configurations and make the arrangements to maximize the teaching / learning environment for that particular course. Some classroom environments have incorporated an arrangement similar to the Technology Enhanced Active Learning Center (TEALC) to improve the learning process. Now having lecture rooms, full labs, and half labs, students are better able to incorporate technology in the learning process. The different blends of learning styles are incorporated on a full scale with and without computing technologies to enhance the critical thinking skills. The district's Technology Enhanced Active Learning Center (TEALC) that features the open, flexible and highly adaptable learning lab has worked well for the self-motivated students, while others continue with the more traditional classroom arrangement. The district is researching the benefits of bringing virtual reality into the classroom environment to facilitate the move from a passive learning style to a more interactive learning style that would also enhance the level of creativity among the students.

We will continue to utilize wired desktops to gain access to the network via an authentication process with the Active Directory Services running on the Microsoft Windows Server Operating System. As it provides the tools for the learning lab environment, it also accommodates the student assessment activities. There is also an asserted effort to migrate to the wireless technology as more advancements are made in its ability to support higher bandwidth throughout the network. With the growing need for mobile technology within the district, the wireless initiative has brought on new challenges with the addition of Bring Your Own Device (BYOD) components which includes the implementation of the various types of devices (desktops, laptops, tablets, cell phones, etc.). With the implementation of Stewart Business Systems, the district is monitoring the usage of printer usage and incorporating technologies for mobile print capabilities. Bradford Networks was added as a solution to monitor devices entering and accessing resources on our network. The wireless network continues to move into a more secure environment with the additional use of controllers and a higher level of encryption. It has also prompted the need to do more investigation into topics such as Cyber Security and the like.

All Schools communicate over private lines via a Wide Area Network (WAN) using CISCO Interconnectivity Devices. Voice, Data, and Video transmission are exchanged between the different locations and regularly communicate over the Internet. Primarily supported by funding from the Government via E-Rate, there

are some restrictions that must be maintained while using the implemented devices and upgrading to new systems. There are also strict requirements to stay compliant with the Children Internet Protection Act (CIPA) in all phases of using technology, especially when accessing the Internet. We have since implemented Open DNS as our filtering system moving away from Websense and Smoothwall when going out to the Internet. This move has allowed the district issued devices provided to students to be filtered as they leave the district. A new cloud based application (OpenDNS) has filtered the systems while working on both sides of the network boundary, while they are accessed within the district and also when taken home or used anywhere outside the district when accessing the Internet.

It is important to know that much of the technology implemented is a direct response to the needs of the administrative and teaching staff as well as meeting the requirements of the Partnership for Assessment of Readiness for College and Careers (PARCC). This high-tech hardware and software application environment is supported by a variation of DELL, HP, and Apple devices in combination of Cisco communications equipment that are maintained by the Information Technology Department of the District with the additional support of teachers, vendors, and outside consultants. Some of the newer initiatives are also testing the possibility of using thin client systems such as Chrome Books when primarily using Internet technologies, and for the more rugged environments like the vocational shops we are looking at devices similar to a toughbook or toughpad.

Since the last Technology Plan, the Information Technology Department has redesigned the Technology Infrastructure which enabled the District to respond to the increased demands as we move forward with an environmental framework for the 21st Century teaching and learning. The infrastructure's IP scheme has made it very manageable to work with the internal network as the segmentation needs seem scalable for each added Local Area Network (LAN). The Wide Area Network (WAN) now allows each location to communicate directly to any other location within the district at a much high rate to accommodate the increased bandwidth needs. This new design has an increased bandwidth of a minimum 200Mbps between each location.

In Addition to the WAN upgrades the district added an Internet at each location maintaining an option to configure a failover whenever circuit failure occurs. As an answer to the cloud computing environment the district has implemented 200Mbps at each location which is a substantial increase from the 100Mbps for the entire district. However, the increased traffic and the proliferation of cloud computing, continues to challenge the district for additional bandwidth to the Internet. Each location is now being considered for an upgrade as the new options become available during the E-Rate renewal process. The new plan is

expected to increase the WAN network to 500Mbps circuits and individual 500Mbps Internet circuits at each location to accommodate to district requirements. Each Internet connection will include an Adaptive Security Appliance (ASA) from Cisco to protect the District from the latest threats and challenges of using the Internet.

The existing servers were repurposed as needed to accommodate the changing requirements for each school location. In order for these devices to support the new environment we are implementing more uses of virtualization technologies that will be used to accommodate the different purposes while providing the flexibility of immediate change. The above mentioned changes have made a dramatic improvement in the performance of the network transmission of packets which is capable of handling the increase in the streaming Technologies for the District's Administrative and Academic environments.

PowerSchool, the major Student Information System (SIS), is still hosted by Pearson Education, Inc. and it continues to support the teachers in maintaining the attendance, grades, assignments, and other reports while assisting in the assessment process, and easing the teaching environment. This system still interacts with Odyssey system (CBORD) that provides assistance in the daily attendance and manages the meal plans for all four schools. PowerSchool continues to evolve as the district migrates some of its components to a more integrated environment. "Alert-Solutions" has replaced "School Messenger" as the new communication tool when it is necessary to inform the entire district at the times of an emergency or a sub-group for special interest information. The CBORD program which currently manages the meal plans for all for schools is in the process of being replaced by "CC Productions" which is bringing in biometric technologies to record transactions at the register as well as provide reporting for student's eligibility. PowerSchool is moving in direction of online registration and reporting to assist in the reduction of printed communications. It would also improve the speed and accuracy of our communications and maintain better audit trails for future research and verification.

Three-Year Educational Technology Plan Inventory Table

Area of Need	**Describe for e-rate funded year 1 2016-17**	**Describe for e-rate funded year 2 2017-18**	**Describe for e-rate funded year 3 2018-19**
Technology Equipment including assistive	Upgrade and add (computers, printers, servers, routers, and	Upgrade and add (computers, printers, servers, routers, and	Upgrade and add (computers, printers, servers, routers, and

technologies	switches) as needed to support the needs of the District.	switches) as approved in the E-Rate 2016-2017.	switches) as needed for the new campus environment.
Networking Capacity	Upgrade the MPLS full-mesh WAN network to 500Mbps for remote sites and 500Mbps for each Internet access with the failover capability should a connection be lost at any location.	Maintain the MPLS full-mesh WAN network having 500Mbps for remote sites and 500Mbps for each Internet access with the failover capability should a connection be lost at any location.	Adjust the full-mesh WAN network as needed and implement multiple Internet circuits to accommodate the Internet access with the failover capability should a connection be lost on either side.
Filtering Method	Continue with the filtering at the device level using a Cloud based DNS services	Continue with the filtering at the device level using a Cloud based DNS services	This will comply with the existing filtering technology at the time
Software used for curricular support and filtering	Use MS Office/365 along with the Courseware from Texts and the OpenDNS software application to filter all web pages entering the District.	Upgrade to the current versions of MS Office/365 and use the text accompanied software and evaluate the OpenDNS software application for filtering.	Maintain the current versions of MS Office/365 and use the text accompanied software along with the most viable application for filtering.
Technical Support and Maintenance	Maintain and enhance existing computers and replace them on an as needed basis while keeping active contracts to support the hardware, software, and the computer-based training (i.e., Smartnet, Microsoft, and CBT Nuggets).	Maintain and enhance existing computers and replace them on an as needed basis while keeping active contracts to support the hardware, software, and the computer-based training (i.e., Smartnet, Microsoft, and CBT Nuggets).	Maintain and enhance existing computers and replace them on an as needed basis while keeping active contracts to support the hardware, software, and the computer-based training (i.e., Smartnet, Microsoft, and CBT Nuggets).
Telecommunications Equipment and Services	Maintain telephones, faxes, and Internet connectivity, along with a viable WAN connection between all active sites.	Maintain telephones, faxes, and Internet connectivity, along with a viable WAN connection between all active sites.	Maintain telephones, faxes, and Internet connectivity, along with a viable WAN connection between all active sites.

Other Services:	Additional SmartBoards, projectors, etc. added on an as needed basis.	Implement the use of a Network Monitoring System to assist in observing end nodes, and resolving network issues.	Continue with open-ended monitoring to improve HW, SW, and Infrastructure as needed to meet the District requirements.

The web-based application, WebHelpDesk continues to provide online access for users in the district to receive assistance for a number of different types of technology requests. These requests are tracked as needed to maintain sufficient turnaround for problem resolution and to respond to requests from the users in and out of district. The continued use of this system shows the improved communications between the users of the technology and those supporting the technology for the district.

With the continued assistance from the Government via E-Rate, NCLB, Perkins, and the like, the district plan to allocate the funding in such a way that it provides the greatest ROI, and improvements in the usage of the available technologies. It is the purpose of the I.T. Department to continue to support the Business, Learning, and Communications for the district by providing an improved infrastructure so it can continue to grow in its efforts of the Life-Long Learning Initiatives.

It is expected that many other benefits will become available to the students within the district as we move forward with the idea of the new campus for Essex County Vocational Technical Schools. There is a possibility that student emails could be accompanied by web pages developed by the students of the technology curriculum. More space to locate independent servers for these types of classroom activities would enhance the awareness of the current and future technologies for our students.

The new campus idea prompts one to think how the community connection can be enhanced with afterschool programs for elementary students planning to attend our district in the future. Acting as a catalyst for improving existing grades and raising the expectations for our curriculum of study, the district would gain value time in preparing students for the 21st Century learning environment. This would surely increase the knowledge of those students, and provide a better quality enrollment for future classes to come.

The district's current practice is to require three-year warranties and/or service contracts on all computer hardware acquisitions, including support for the

operating system. After three years, the district staff maintains the hardware and software.

The ideas, plans, and concepts expressed above are referenced with the current technologies available today. As new ideas, concepts, and technologies become available, plans will be adjusted to adapt, and the district will implement the best business practices and solutions it can provide for its student, staff, and administrative bodies.

Educators' Access to Educational Technology

Teachers have access to the standard applications such as Microsoft Office or Office365 and those accompanying the texts directly on their desktop, or laptop in the classroom where they teach. Many include the use of educational technologies such as SmartBoards, document cameras, and web-cams, which extend beyond the conventional classrooms. It is intended that additional 3D technologies with the use of Virtual Reality (VR) being added in the near future to enhance the learning process. The Student Information System (PowerTeacher) is available to all teachers and many aids to manage the classroom and in some cases used from home to maintain grades and assignments. Some teachers have included the use of iPads, cell phones, and tablets to accommodate the flexible needs in the classroom environment. These along with other technologies allow teachers to communicate with students, parents, and administrators on a regular basis.

Administrators' Access to Educational Technology

Administrators generally access the Student Information System (PowerSchool) directly on their desktop to manage student demographics and behavioral information. Some information for attendance or that which qualifies students to receive a variety of state benefits is also maintained. Guidance, Main Office, and the Nurse Office are the major functional areas dealing directly with student data with major support from the Department of Information Technology. Other departments like Central Office and Information Technology assist in managing policies, procedures, and managing the privacy and security of the information being stored. Administrators have also joined in using mobile technologies like cell phones, iPads and tablets to complete necessary tasks on a regular basis.

District Website is accessible to ALL stakeholders (Federal Accessibility Standards)

The District's Website is accessible to all stakeholders, students, teachers, and staff via the browser software on the desktop computers. One may gain access through

the wireless network as well without authenticating onto the network, but must be configured with an encrypted password to transmit over the wireless access points. The Website is also available to the public to obtain general information regarding the District, school programs, and events, as well as regularly scheduled meetings open to the public. The website is maintained internally and updated on a regular basis keeping information current while meeting the Federal Accessibility Standards.

Plan for Replacing Obsolete Technology

The District's current practice is to require three-year warranties and/or service contracts on all computer hardware acquisitions, including support for the operating system. After three years, the District staff maintains the hardware and software. The District has recently adopted a technology distribution program of the old computer systems that enhances the home computing environment for our current students. The technology teachers are rebuilding old computers in their classroom environments with the assistance of the Information Technology Department provisioning the parts of systems that are deemed obsolete for use by the District. The goal here is to foster an active ratio of 1:1, student to computer learning environment in school and at home. This is just one of the added services provided to the students in our District.

Cyber Safety

Filtering Methods

Essex County Vocational Technical Schools is in compliant with the Children's Internet Protection Act (CIPA) of 2000 and continues to maintain the changes to the act over the years. To conform properly when connecting to any website outside the boundaries of the District's Network for the State of New Jersey K-12 educational institutions, we are running a fulltime filtering software for all desktop systems accessing the Internet. It is our goal to continue filtering student systems issued by the district beyond the boundary of our network by filtering the Internet at the device level. The Microsoft Exchange Server was recently replaced by Office365 which stores all emails for the District. This system filters excessive and undesirable emails reaching both Microsoft and Apple clients. A District-wide anti-virus application (Sophos) has been installed to protect the overall computing environment. Each shutdown process is accompanied with a thorough scan of the entire storage for each local system to assure a proper startup for the subsequent session. Although we secure the boundaries from the outside predators, we must also seek protection internally from the possibility of being infected from internal file transfers, etc. This is done with periodic updates and scans throughout each active session.

V. FUNDING PLAN (September 2016- June 2019)

With the use of technology to improve teaching and learning being heavily emphasized, funds have been allocated to provide resources to students and teachers. *There is an ongoing effort to provide students and educators with access to technology so that professional growth and student learning is maximized.*

Three-Year Educational Technology Plan Anticipated Funding Table (2016-17)						
ITEM	**LOCAL FUNDING**	**PERKINS**	**NCLB**	**IDEA-B**	**E-RATE**	MISC. (e.g. Donations, Grants, etc.)
Digital curricula (see NIMAS)				$1,200		
Digital media needed to achieve goals	$21,883.33		$20,000			
Technology Equipment	$57,265	$504,000			$135,927	
Network	$77,800				$718,000	
Capacity	$49,038					
Filtering	$21,450					
Software	$105,858	$31,000	$15,000	$10,000		
Maintenance	$56,782	$4,025		$10,000	$3,200	
Upgrades	$218,872		$50,000	$20,000		
Policy and Plans						
Other services	$187,390			$5,000	$21,300	$6,000 -IIS
Further Explanation:						

Three-Year Educational Technology Plan Anticipated Funding Table (2017-18)						
ITEM	**LOCAL FUNDING**	**PERKINS**	**NCLB**	**IDEA-B**	**E-RATE**	MISC. (e.g. Donations, Grants, etc.)
Digital curricula (see NIMAS)				$1,200		

Digital media needed to achieve goals	$21,883.33		$20,000			
Technology Equipment	$57,265	$385,000			$164,100	
Network	$77,800				$718,000	
Capacity	$49,038					
Filtering	$21,450					
Software	$105,858	$30,057	$15,000	$10,000		
Maintenance	$56,782	$3,025		$10,000		
Upgrades	$218,872		$50,000	$20,000		
Policy and Plans						
Other services	$187,390			$5,000		
Further Explanation:						

Three-Year Educational Technology Plan Anticipated Funding Table (2017-18)						
ITEM	**LOCAL FUNDING**	**PERKINS**	**NCLB**	**IDEA-B**	**E-RATE**	MISC. (e.g. Donations, Grants, etc.)
Digital curricula (see NIMAS)				$1,200		
Digital media needed to achieve goals	$21,883.33		$20,000			
Technology Equipment	$90,265	$305,000			$180,000	
Network	$77,800				$718,000	
Capacity	$49,038					
Filtering	$21,450					
Software	$105,858	$30,057	$15,000	$10,000		
Maintenance	$56,782	$2,025		$10,000		

Upgrades	$218,872		$50,000	$20,000		
Policy and Plans						
Other services	$187,390			$5,000		
Further Explanation:						

VI. Evaluation Plan

Three-Year Technology Plan Evaluation Narrative	
Describe the process to regularly evaluate this plan as <u>effectively</u>. . .	
a. integrating technology	Curriculum are evaluated, reviewed, and revised annually for use and integration of varied technologies. Annual review of funds allotted for technology to ensure that program focus remains on instruction and learning. (Superintendent, Business Administrator, Director of CTE, Content Area Supervisors, IT Supervisor, Principals, Supervisor of Program Accountability and Assistant Superintendent for Curriculum and Instruction)
b. enabling students to meet challenging state academic standards	Lesson plans are reviewed weekly by administrators to assess alignment with technology standards using edConnect. (Superintendent, Business Administrator, Director of CTE, Content Area Supervisors, IT Supervisor, Principals, Supervisor of Program Accountability and Assistant Superintendent for Curriculum and Instruction)
c. developing life-long learning skills	Professional learning will be provided to all staff to ensure high levels of student learning and performance. (Superintendent, Business Administrator, Director of CTE, Content Area Supervisors, IT Supervisor, Principals, Supervisor of Program Accountability and Assistant Superintendent for Curriculum and Instruction)