Norfolk Public Schools
NATIONALLY RECOGNIZED. GLOBALLY COMPETITIVE.

2016 - 2018
Educational Technology Plan
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ADDENDUM

Educational Technology Planning Committee

2010 – 2011

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Educational Technology Plan Meeting Dates

Date	Time
February 9, 2011	9:00 – 3:30
February 24, 2011	9:00 – 3:30
March 9, 2011	9:00 – 3:00
March 10, 2011	9:00 – 3:00
April 27, 2011	8:30 – 3:00

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Executive Summary

The Educational Technology Plan for 2016 – 2018 will support present and future teaching and learning styles by planning for technology integration initiatives. The integration of technology in classrooms is a complex change process that involves supporting curriculum goals through the instructional use of technologies to enhance student learning (Mollette et al, 2010). Strategic planning is critical to the success of technology integration. To fully embrace this complex process, Norfolk Public Schools developed a detailed technology plan through the collaborative efforts of various stakeholders. A series of technology planning labs were facilitated by Meeks Educational Technologies (M.E.T.). The Norfolk Public Schools Educational Technology Plan Committee consisted of technology representatives from each level of school, school principals, teacher associations, Facilities Management, Leadership and Capacity Development, Strategic Evaluation, Assessment and Support, district technology support staff, administrators, and division executives. Stakeholders were invited to share their views, recommendations, priorities, and stories related to the use of technology in the Norfolk Public Schools program. Due to the constant change in technology, this will be an ever evolving document, re-evaluated on an annual basis and will incorporate new findings into the plan over time.

Priorities and Mission

The School Board of Norfolk Public Schools has set the following 5 Year Strategic Plan:

- We will promote NPS as the cornerstone of our community's well-being.
- We will empower and facilitate meaningful family and community partnerships.
- We will relentlessly pursue engaged learning through high-quality instruction.
- We will host environments in which all individuals feel safe and secure.
- We will nurture a culture of excellence, equity and justice through continuous improvement.

Board and Division Priorities

1. Ensure full accreditation
2. Increase academic achievement of all students – raise floor and ceiling simultaneously to close achievement gaps
3. Improve climate, safety and attendance
4. Become a School Board of Distinction
5. Promote Norfolk Public Schools to reflect outstanding accomplishments of staff, teachers and students
6. Develop and coordinate a capital improvement plan for facilities and technology to enhance teaching and learning
7. Attract, retain, and help to develop strong academic families and highly qualified teachers and staff

Mission: What We Believe

The mission of Norfolk Public Schools, the cornerstone of a proudly diverse community, is to ensure that all students maximize their academic potential, develop skills for lifelong learning and are successful contributors to a global society, as distinguished by:

* Courageous advocacy for all students.
* Family and community investment.
* Data-driven personalized learning.
* Strong and effective leadership teams.
* Shared responsibility for Teaching and Learning.
* Access to rigorous and rewarding college and career readiness opportunities.

Process

The Norfolk Public School's *Philosophy of Teaching and Learning* provides a clear set of priorities for focusing the efforts of the division. The technology planning participants reviewed the district's core documents and made them the basis for all analysis and discussions throughout the process.

Norfolk Public School's *Philosophy of Teaching and Learning*

Norfolk Public Schools is committed to developing students who value learning and the "habits of the mind" (a mental discipline practiced so that it becomes a habit or natural process) that will enable them to adjust successfully to the changing world. We will accept the responsibility for engaging the entire community in preparing lifelong learners who are able to understand the world in which they live and have the skills needed to learn and succeed throughout their lifetime. We will recognize, value, and build upon both the individual differences and the similarities in our students.

Students will have learning experiences that respect and address the strengths and needs of ALL students. These learning experiences will be like those found in day-to-day life and based upon broad concepts flowing from the general to the more specific. Students will learn to make responsible choices, overcome challenges, and take responsibility for their own learning. Students will attain academic proficiency as defined by local, state and national standards. Students will have many opportunities to internalize and demonstrate their understanding of newly acquired information, skills, and processes that are tied to rigorous academic standards.

Each stakeholder has a role to play. All stakeholders will approach their relationship with students, parents, teachers, administrators, and community members with respect to promote a positive learning experience.

Administrators will provide support and instructional leadership by creating and maintaining a clear focus on student achievement driven by the district's vision. Well prepared teachers, safe and secure school facilities, sound and rigorous curriculum, adequate resources, and appropriate support services will be needed to create and maintain this focus. Administrators will be advocates for all students.

Keeping the focus on student needs will ensure that educational opportunities to meet world class standards will always be available for all the students.

Teachers will be knowledgeable of and competent in the content areas they teach and have the ability to relate this content to the students' past, present, and future learning experiences. Teachers will utilize effective classroom management and teaching strategies to ensure learning at high levels for all students. They will use various assessments to determine students' understanding and to plan classroom instruction.

Students must assume responsibility for their own learning if they are to be successful. Therefore, we expect that students will come to school prepared to learn. We expect all students will follow the established rules and contribute to a disciplined learning environment. Most importantly, each student will be an active participant in the learning process.

Parents must be active partners with schools to provide the support and assistance that will ensure the success of their children. Parents' responsibilities include supporting school rules, programs, and goals, championing homework, showing an interest in their child's educational experiences, and never giving up on their child.

Community members must embrace and support ongoing efforts to provide rigorous academic opportunities to children. The progress and condition of the community is dependent upon the educational success realized by its citizens.

By implementing this philosophy, Norfolk Public Schools will become the cornerstone of a proudly diverse community.

Vision

This Technology Plan will support present and future teaching and learning styles by planning for technology integration initiatives. The integration of technology in classrooms is a complex change process that involves supporting curriculum goals through the instructional use of technologies to enhance student learning (Mollette et al, 2010). Strategic planning is critical to the success of technology integration. To fully embrace this complex process, Norfolk Public Schools developed a detailed technology plan through the collaborative efforts of various stakeholders. A series of technology planning labs were facilitated by Meeks Educational Technologies (M.E.T.). The resulting document provides a working methodology to prioritize and phase the technology implementation throughout the Norfolk Public Schools existing and new campuses in concert with professional development strategies. The Norfolk Public Schools Educational Technology Plan Committee consisted of technology representatives from each level of school, school principals, teacher associations, Facilities Management, Leadership and Capacity Development, Strategic Evaluation, Assessment and Support, district technology support staff, administrators, and district executives. M.E.T. facilitated awareness and discussion sessions which assisted in solidifying a shared mission and common goals. Stakeholders were invited to share their views, recommendations, priorities, and stories related to the use of technology in the Norfolk Public Schools program.

Bringing together teachers and administrators, in both face-to-face and online environments using Desire to Learn (D2L), provided the Educational Technology Plan Committee members with an opportunity to discuss and reflect upon all shared ideas in an on-line discussion. Due to the constant change in technology, this will be an ever evolving document, re-evaluated on an annual basis and will incorporate new findings into the plan over time.

Needs Assessment

Assessing the needs in educational technology is a complex key process in order to deliver services which support instruction. The initial assessment was incorporated into the collaborative planning function and involved all stakeholders. Standards applied to the assessment were the Virginia Standards of Learning, specifically the Virginia Computer Technology K-12 curriculum, and the National Educational Technology Standards for Students (NETS), as suggested by the International Society for Technology in Education (ISTE). During the collaborative planning labs several types of questions were asked of the participants to obtain feedback regarding their perception of how the district addresses curriculum, instruction, management and assessment of learning. Topics included the role of technology in communications, interactive learning, and the role of simulations in "real world" learning experiences as opposed to functional use. Additionally, exploratory questions included "What knowledge, and skills should students learn?"; "What skill sets are appropriate for what grade levels?"; and "What is the appropriate use of technology to deliver these skills?". With regard to technology, how do environment, engagement, application, tools, impact student results?

Environment:

Technology is no longer a luxury**.** It has become mission critical for instruction and school administration. The use of technology, the Internet, and having access 24/7 are an integral part of the business of education. Learning takes place in a blended environment, making use of both physical and virtual resources daily. Instructional spaces in more modern facilities support the placement of technology in the classrooms. Older facilities are more problematic. It is evident where standard classrooms have been converted to computer labs, the amount of space related to the number of workstations is inadequate. Most instructional spaces in Norfolk Public Schools follow traditional lecture classroom settings, yet can be reorganized to support small group and project based learning. Availability of AC power varies from facility to facility. Newer buildings have more AC power available but that power is not always available where it is needed. Older buildings, as a minimum require the addition of new power circuits in every instructional space. Some older facilities require additional electrical services to be installed from the street. Where standard classrooms have been converted to

computer labs, the HVAC systems are not adjusted to accommodate the additional load of computers. The end result is those rooms experience inadequate air flow, resulting in high CO2 ratios and high ambient temperatures during the second half of the school day. A number of the technical spaces, specifically those locations where closets were utilized as telecommunication rooms, do not have any HVAC zoning capacity. In general, cable pathways in walls followed industry accepted standards. Cables located above ceilings were not consistently supported according to industry accepted standards. Typical instructional spaces across the District utilized high deflection acrylic lens for fluorescent fixtures, causing glare on TV and computer monitor screens. Most lighting fixtures in instructional spaces were not zoned to create a darkened area of a wall for large screen presentation capability (Meeks, 2011).

Engagement:

There are many engaging student activities, facilitated by instructional staff, involving technology at most building sites. Norfolk Public Schools instituted integrated Student Technology Skills sets for all students by the end of the 8th grade. The work of technology integration in the content areas is an on-going process that reflects thoughtful use of emerging technologies. Additionally, secure, on-line access to curriculum documents is needed by the instructional staff.

There is a wide fluctuation across the district with regard to the distribution of instructional technology for all students and teachers at all schools. The Title I elementary schools use more advanced classroom technology than those elementary sites without compensatory federal funding. Secondary schools have some grant opportunities for the implementation of instructional technology. Participants observed that the development of technology skill sets of students have a wide fluctuation dependent on a number of factors. The planning participants agreed that variation of student technology skill sets and access to technology lies somewhere between “all of the students, most of the time” and “most of the students, some of the time.” (Meeks 2011)

Application:

Every teacher in Norfolk Public Schools’ classrooms utilizes a computer to manage grades, attendance, email, curriculum resources and teacher web pages. Training and support for those tools are clearly established. Students and teachers are accessing the Internet when needed and obtaining

web information as a resource. Access to the buildings in general and to the technology labs, in particular, varies building by building and grade level. The determination of needs and delivery of after-hours solutions are site level based decisions. The on-line SOL testing initiative for all subject areas requires special consideration in all areas to support this activity. When SOL testing is occurring within the school, those testing spaces and computers are not available for standard use by the student population or staff. All school staff members are affected by the SOL testing activities. (Meeks, 2011)

Tools:

During the planning process various discussion points addressed the level of technology support, teacher expertise, email communications, grading, assessment, multimedia presentation techniques, use and proficiency in using Microsoft Suite, use and application of student information data, attendance, Internet use proficiency and frequency, technology lesson plans, and the sharing of best practices.

Over 90 % of the teaching staff has met the Virginia Technology Standards for Instructional Personnel (TSIP) requirements. Those skill sets pertain to computer use, productivity tools, and troubleshooting. TSIP do not address the technology skill sets associated with production of multimedia content which supports instructional activities. The train-the-trainer method currently used in the division through the district Instructional Technology Specialists builds local capacity for leadership and expertise with technology and curriculum. Teachers, informally, share best practices and lesson plans incorporating technology integration. The provision of a more formal, web-based access, to these resources would be of value. The division delivers a formal process for development of technology integration within specific content areas.

Technical support is considered a tool that supports teaching and learning. The division has continued to increase efficiency regarding virtualization of servers and minimization of individual servers located at the division Data Center. The division utilizes VLANs, a number of Layer 3 protocols, automatic user account password authentication and revision, or an ITIL methodology. Areas of continuous improvement include firewall protection and content filtering. It may be of value to secure a network security audit for the division to assess vulnerability and determine if additional upgrades to the Division's security processes and protocols are required. (Meeks, 2011)

Results:

Norfolk Public Schools is a results oriented organization. There is on-going assessment and revision of district plans. The standards applied to this assessment were those of the International Society for Technology in Education (ISTE) Support Index, Office of School Excellence-State of Michigan, and American Association of School Administrators – Technology Planning and Policies Division and best practices as observed by MET. Within the planning process, an effort was made to determine the levels and types of communication and planning processes between and among division groups. Questions were centered on the circumstances and clarity of that planning and communication. Such as "Did direction for the use and support of instructional technology come from multiple points within the organization? Was the reporting of progress and problems functional and logical? Does cross-functional collaboration exist or is it difficult? Do clear communication channels exist within a campus site and central support? What types of interaction were planned, formal, and / or repetitive?"

Recommendations for improvement to support student learning include:

- Continued integration of engaging and interactive learning activities in the instructional program
- Coordinated division selection/adoption/implementation procedure for software and hardware
- Communication of the division managed set of standards for hardware
- Continued communications among stakeholders with regard to technology
- Establishment of a budget line item to track all technology investments

Actions

Goal 1: Environment
Provide a safe, flexible, and effective learning environment for all students

Objective 1.1: Deliver appropriate and challenging curricula through face-to-face, blended, and virtual learning environments.

Strategies	Measures
Expand on-line course enrollment for AP courses	Student enrollment reports
Expand on-line course enrollment for high school credit recovery	Student enrollment reports

Objective 1.2: Provide the technical and human infrastructure necessary to support real, blended, and virtual learning environments.

Strategies	Measures
Upgrade network infrastructure to ensure robust on-line access to support learning, collaborating, assessing.	Observation, staff and student surveys, Helpdesk reports
Integrate content management software for teacher curriculum access, and blended learning	Number of teacher accounts to content management system

Objective 1.3: Provide high-quality professional development to help educators create, maintain, and work in a variety of learner-centered environments.

Strategies	Measures
Provide professional development to support technology integration learning opportunities	District instructional technology specialists' calendars, District PD offerings/calendar
On-line professional development through PBS' Any Time Any Where courses, PD 360, and other on-line opportunities	Log of participation

Goal 2: Engagement

Engage students in meaningful curricular content through the purposeful and effective use of technology.

Objective 2.1: Support innovative professional development practices that promote strategic growth for all educators and collaboration with other educators, content experts, and students.

Strategies	Measures
Adopt solution and provide training on technology that supports collaboration and professional discourse	Professional development calendar
Analyze data collected through the classroom walkthrough tool to identify successful technology integration patterns	Walkthrough tool data

Objective 2.2: Actualize the ability of technology to individualize learning and provide equitable opportunities for all learners.

Strategies	Measures
Provide differentiated, on-line resources that support the curriculum	NPS' Reference Resources web site hits
Explore the use of mobile devices	Evaluation of mobile devices

Objective 2.3: Facilitate the implementation of high-quality Internet safety programs in schools.

Strategies	Measures
Support Internet Safety instruction through the Internet safety webpage	NPS Internet Safety web page
Evaluate social media use and policy	NPS Social Media policy
Produce a K-5 version of Internet Safety Rules	NPS Internet Safety web page

Goal 3: Application

Afford students with opportunities to apply technology effectively to gain knowledge, develop skills, and create and distribute artifacts that reflect their understandings.

Objective 3.1: Provide and support professional development that increases the capacity of teachers to design and facilitate meaningful learning experiences, thereby encouraging students to create, problem-solve, communicate, collaborate, and use real-world skills by applying technology purposefully.

Strategies	Measures
Develop teacher workshops on multimedia production to where teachers will create instructional content to support the curriculum.	Professional development calendar
Provide professional development in the instructional use of blogs and other collaborative tools.	Professional development calendar

Objective 3.2: Ensure that students, teachers, and administrators are Information and Communications Technology (ICT) literate.

Strategies	Measures
Support instructional staff acquisition of TSIP certification.	Human resources reports
Evaluate and update curriculum documents to ensure NETS-T and NETS-S alignment	Describe the evaluation process

Objective 3.3: Implement technology-based formative assessments that produce further growth in content knowledge and skills development.

Strategies	Measures
Support the use of on-line formative assessments	Testing calendar
Support the continued professional development to support data driven instructional decision making	Professional development calendar

Goal 4: Tools

Provide students with access to authentic and appropriate tools to gain knowledge, develop skills, extend capabilities, and create and disseminate artifacts that demonstrate their understandings.

Objective 4.1: Provide resources and support to ensure that every student has access to personal computing device.

Strategies	Measures
Provide access to technology for student productivity	School inventory report
Evaluate 1:1 technology implementation with regard to academic achievement	Information Technology and Academic Affairs departments

Objective 4.2: Provide technical and pedagogical support to ensure that students, teachers, and administrators can effectively access and use technology tools.

Strategies	Measures
Develop and implement technical support plan to provide daily support to schools	Every School, Every Day support plan
Monitor technology support requests to align support with need	Helpdesk reports

Objective 4.3: Identify and disseminate information and resources that assist educators in selecting authentic and appropriate tools for all grade levels and curricular areas.

Strategies	Measures
Coordinate division selection, adoption, and implementation procedure for emerging technologies	Information Technology Department
Provide resources to support innovative technology integration and digital content in the instructional program	Professional development calendar, NPS' Reference Resources web site

Goal 5: Results

Use technology to support a culture of data-driven decision making that relies upon data to evaluate and improve teaching and learning.

Objective 5.1: Use data to inform and adjust technical, pedagogical, and financial support.

Strategies	Measures
Continue to provide training in the use of on demand student achievement data	Professional development calendar, Use reports from SchoolNet and various division data reports
Continue to provide training for administrators' data collection "walk through tool and report generation	Professional development calendars

Objective 5.2: Provide support to help teachers disaggregate, interpret, and use data to plan, improve, and differentiate instruction.

Strategies	Measures
Provide on-line, robust, easy to use system to support student assessment	SchoolNet
Continue to provide teacher training on how to use formative data instructionally	Professional development calendars

Objective 5.3: Promote the use of technology to inform the design and implementation of next-generation standardized assessments.

Strategies	Measures
Investigate emerging learning assessment technologies	Describe process to investigate system
Survey teachers and administrators to ascertain system requirements	Develop and administer survey

Educational Spaces

Infrastructure

Flexibility is the “key issue” for good technology infrastructure. Specifically, flexibility regarding the location of student laptop or desktop computers is critical. Video/presentation technology requires coordination and is typically oriented in coordination with the “teaching wall/area” of a classroom which limits the flexibility of that delivery system. Video system flexibility is more related to the sources that can be displayed rather than where in the room it is located. Some of the “best practices” observed which architectural teams should address are:

AC Power

The access to AC Power is not limited to a specific wall or section of a wall. Power is available at many points along the walls and can be routed through furniture to access the center of a room if necessary. It may be of value to provide some floor access to power, though it will have an impact on budgets. It should also be noted that in today’s world, there is no technical reason to separate convenience power and power for technology. Additionally, power should be made available at the video display or video projector locations.

AC power must also accommodate the door access control and video monitoring devices integral to security systems that are becoming standard for Norfolk Public Schools.

Cable Pathways

It is an expectation that many data connections will change over to wireless access points. However, those wireless transmitters must be hardwired back to a telecommunications room and we do not expect voice or video (over the data network) to operate on a wireless system at a price affordable to the K-12 market in the near future (10 years). However, there will be the need to allow the relocation of hardwired and wireless connections throughout a facility when wireless access points become the standard. The cable pathway should accommodate the capacity to install cabling from any point in the building to another point and to multiple points in a classroom.

Security Systems are migrating to a data network centric model, yet requiring hardwired data network connections. Beyond enabling data, voice, and video pathways for connections related to instructional activities, the cable pathways must also accommodate security systems.

Systems and Components

Meeks Technology Group facilitated the development of specific configurations of technology within each type of space within Norfolk PS, since that original configuration, the teaching space has evolved. If there were no financial restrictions, what would the Planning Lab participants suggest as an ***IDEAL*** technology configuration for every space within the Division. The following provides both a verbal and graphical overview of the participants' input.

1. **TYPICAL CLASSROOM FRAMEWORK:** The items below represent a typical configuration for all instructional spaces.

   INTERACTIVE BOARD: All instructional spaces will have a Projector and whiteboard which enables the display or playback of various mobile devices including, but not limited to, computers, digital cameras, IPODs, digital camcorders, document cameras, probe systems or other playback devices. The "teacher" panel will provide will provide input up to the projector and sound system.

   TELEPHONE: Each instructional area will have a Voice Over IP multi-function telephone located on the Teacher Desk and connected to the campus voice system and voicemail subsystem. The system should be capable of being programmed to automatically route all incoming classroom calls to the respective voice mailbox, while providing "message waiting" indication at the phone.

   PRINTER: Each instructional space will have access to printing capacity

   COMPUTERS: Each teacher will have a laptop and dependent upon the grade level and content, additional workstations may be required within specific classrooms. The more current trend is to utilize the SOL laptop carts for student computers on an ad hoc basis

   DATA NETWORK INTERFACE: Computers and network printers located in the instructional space will access the building-wide data network. Each space will support up to five hardwired data ports as follows:

   - Laptop, VoIP Phone, and printer at teacher desk
   - AV Control System (Potential requirement)
   - Wireless access point cable above the ceiling
   - Student laptop carts which teachers have available or share.

2. **ON-LINE ASSESSMENT SPACE:** Specific classrooms within Norfolk Public Schools facilities are utilized for SOL Testing and are very similar to typical classrooms with furniture and AC power changes. Those classrooms should have:

   1 Interactive Board
   1 VoIP Phone
   1 Teacher Laptop
   1 Network Laser Printer
   1 Wireless Access Point

3. **COMPUTER LAB FRAMEWORK:** Computer Labs are content areas where the curriculum requires students to use computers for eighty percent of the instructional activities in the room. Some labs will consist of multimedia units with user flexibility. The following components are contained in a typical computer lab:

    1 Interactive Board
    1 VoIP Phone
    1 Teacher Laptop
    1 Network Laser Printer
    1 Wireless Access Point
    24 Hardwired Data Ports (number could vary dependent on room size)
    1 Wireless Access Point
    1 Software for Teacher control of monitors and keyboards

4. TYPICAL LIBRARY FRAMEWORK: All Libraries have primary components and functions in common which vary in quantity based on the building grade level served by the Library and its floor plan. Where quantities may vary, the reader will find a question mark "?" in the quantity column. All Libraries should be capable of supporting the following technology:

1	VoIP Phones at Checkout Desk (ES versus HS)
1	Interactive Board Similar to Classroom (Dependent on Floor Plan)
1	High Speed Black and White Laser Printer
1	High Speed Color Laser Printer
2	Circulation Workstation
?	Multi-purpose Computer Stations
?	Hardwired Data Ports
?	Wireless Access Point (quantity dependent on size of space)

5. **CONFERENCE ROOM FRAMEWORK** Conference Rooms should be capable of supporting the following technology:

Main (Principal) Conference Room
1 Interactive Board or Flat Panel Display
1 VoIP Phone
1 Wireless Access Point

Medium to Small Room
1 White Board

6. **TYPICAL OFFICE FRAMEWORK** Administrative offices are scattered throughout the facility and are typically concentrated into an office suite area. Conference rooms, individual administrator offices, general service areas, and receptionist areas comprise those suites. An office herein is defined as a location where an individual works and requires data network and phone access to complete their assigned tasks. There may be more than one person working in a general office area and each desk is counted as an office. However, there are suite level items that are shared by all individuals using the overall suite space.
   The following components are located in an Office Suite:

   Each Individual Work Area Will Contain
   1 Desktop/Laptop
   1 Additional LCD Display - Key administrators will have a second LCD display for monitoring location covered by the Video Surveillance system
   1 Certain Administrators requiring confidentiality will have a personal laser printer. All other personnel will share the network laser printer located in the suite area.
   1 VoIP Phone
   2 Data Port

   Each Suite will Contain Shared Resources
   1 Network Laser Printer
   1 Copier
   ? Data Ports

Challenges

Challenges	Strategy	Goal and Timeline
Capital Funds Norfolk Public Schools does not have a budget line item associated with technology capital expenditures in support of the instructional programs of the District. The lack of Capital Funds for technology (AC Power upgrades, AV systems, etc…) is reducing efficiency, and resulting in an overall lag in technology progress. With a consistent source of funding, the ability to build upon prior investments will be possible.	Build awareness at the Executive, School Board, and City of Norfolk levels that annual funding of capital expenditures is a necessity.	Over the next five years, observe success in an incremental start and incremental increases of a Norfolk PS budgetary line item associated with capital expenditures associated with technology for instruction. Over the next five years observe success in increasing the number of instructional spaces in the division which meet the Technology Frameworks as defined in the prior section.
Refresh Funds Norfolk Public Schools does not have a budget line item associated with technology refresh funds. Currently, the IT Department maximizes state allocations for technology to refresh computing devices across the division using State Technology Grants. There are no sources of funds for refresh of technology in facilities constructed within the last ten years. The end results are that these new, technologically advanced buildings can no longer deliver the instructional technology capacity they originally were capable of delivering.	Build awareness at the Executive, School Board, and City of Norfolk levels that annual funding of technology refresh expenditures is a necessity.	Over the next five years, observe success in an incremental start and incremental increases of a Norfolk PS budgetary line item associated with technology refresh funds. Over the next five years observe success in bringing the technology in more recent facilities back to their design level.

Challenges	Strategy	Goal and Timeline
Federal Funds Using Federal Funds for technology, Norfolk Public Schools has efficiently leveraged securing technology within specific schools for which funds are available. That has created an inequity regarding availability of technology for instructional purposes between facilities. Those facilities eligible for Federal Funds have more technology for students than those who were not eligible for Federal Funds.	As budget line items for Capital Funds and Refresh Funds are developed and implemented, the division will need to continually monitor facilities and rank the instructional technology program needs of each facility. The distribution of those two categories of funds should be "needs" based.	Over the next five years, observe success reducing the range of inequity for access to technology by students across all facilities.
Technology Purchasing Currently, many technology purchases for new or replacement items are facilitated at the local school level from local school funds. This purchasing process yields a wide range of products which may or may not work with existing technology. Additionally, the division loses purchasing power in that each purchase is processed separately.	A high level, executive committee or School Board, procedure needs to realign how technology purchases are made. A successful model would be to adopt the textbook procurement procedure for all technology purchase requests. This will centralize technology purchases to ensure compliance with software and hardware standards and to maximize purchasing efficiency and avoid duplication.	The procedure for technology adoptions, including hardware and software should be implemented immediately by the proposed, division level, Technology Council. The standards development that supports centralized purchasing will require an extensive effort to determine which software should or should not be adopted. This alignment will maximize the district's purchasing power for technology.

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Appendix 1: Budget and Timetable

NPS Annual Technology Operating Budget

2016 – 2017

(to be updated once budget is finalized and approved for SY16-17)

Program	Purpose/Use of Funds	Budgeted Amount
D80 – Information Technology	Contract Services	$
D80 – Information Technology	Telecommunications	$
D80 – Information Technology	Equipment Replacements	$
D80 – Information Technology	Equipment Additions	$
300 – Career & Tech. Education	Equipment	$
700 – Career & Tech. Education	Equipment	$
132 – Media Services	Equipment Replacements	$
132 – Media Services	Distance Learning (Credit Recovery)	$
VA. Technology Initiative (STG)	Funding to support eSOL's	$
Title 11, Part D - Enhancing Education Through Technology Formula Grant	Equipment Additions and Professional Development	$
Carl Perkins – Title 1 Grant	Career and Tech Ed	$
TOTAL		$

Note: Tracking technology line items is currently a challenge due to lack of technology specific budget codes. A recommendation has been made in this plan to create codes for the coming year that will allow for ease of tracking technology in the future.

Objective	Strategies	Timetable	Budget Source

1.1: Deliver appropriate and challenging curricula through face-to-face, blended, and virtual learning environments.	Expand on-line course enrollment for AP courses	Annually	N/A
	Expand on-line course enrollment for high school credit recovery	Annually	N/A
1.2: Provide the technical and human infrastructure necessary to support real, blended, and virtual learning environments.	Upgrade network infrastructure to ensure robust on-line access to support learning, collaborating, assessing.	Ongoing	Information Technology budget
	Integrate content management software for teacher curriculum access, and blended learning	2011 - 2013	NPS Academic budget
1.3: Provide high-quality professional development to help educators create, maintain, and work in a variety of learner-centered environments.	Provide professional development to support technology integration learning opportunities	Ongoing	NPS Media Services budget
	On-line professional development through PBS' Any Time Any Where courses and PD 360	Ongoing	NPS Academic budget
2.1: Support innovative professional development practices that promote strategic growth for all educators and collaboration with other educators, content experts, and students.	Adopt solution and provide training on technology that supports collaboration and professional discourse	Ongoing	NPS Academic budget
	Analyze data collected through the classroom walkthrough tool to identify successful technology integration patterns	Ongoing	N/A
2.2: Actualize the ability of technology to individualize learning and provide equitable opportunities for all learners.	Provide differentiated, on-line resources that support the curriculum	Ongoing	NPS Academic budget
	Explore the use of e-readers and other mobile devices	Ongoing	N/A
2.3: Facilitate the implementation of high-quality Internet safety programs in schools.	Support Internet Safety instruction through the Internet safety webpage	Ongoing	N/A
	Evaluate social media use and policy	Ongoing	N/A
Objective	**Strategies**	**Timetable**	**Budget Source**

3.1: Provide and support professional development that increases the capacity of teachers to design and facilitate meaningful learning experiences, thereby encouraging students to create, problem-solve, communicate, collaborate, and use real-world skills by applying technology purposefully.	Develop teacher workshops on multimedia production to where teachers will create instructional content to support the curriculum.	Ongoing	N/A
	Provide professional development in the instructional use of blogs and other collaborative tools.	Ongoing	N/A
3.2: Ensure that students, teachers, and administrators are ICT literate.	Support instructional staff acquisition of TSIP certification.	Ongoing	NPS Academic budget
	Evaluate and update curriculum documents to ensure NETS-T and NETS-S alignment	Ongoing	N/A
3.3: Implement technology-based formative assessments that produce further growth in content knowledge and skills development.	Support the use of on-line formative assessments	Ongoing	Various NPS department budgets
	Support the continued professional development to support data driven instructional decision making	Ongoing	NPS Academic budget
4.1: Provide resources and support to ensure that every student has access to personal computing device.	Provide access to technology for student productivity	Ongoing	Various grants and department budgets
	Evaluate 1:1 technology implementation with regard to academic achievement	Ongoing	N/A
4.2: Provide technical and pedagogical support to ensure that students, teachers, and administrators can effectively access and use technology tools.	Develop and implement technical support plan to provide daily support to schools	Ongoing	N/A
	Monitor technology support requests to align support with need	Ongoing	N/A
Objective	**Strategies**	**Timetable**	**Budget Source**

4.3: Identify and disseminate information and resources that assist educators in selecting authentic and appropriate tools for all grade levels and curricular areas.	Coordinate division selection, adoption, and implementation procedure for emerging technologies	Ongoing	N/A
	Provide resources to support innovative technology integration and digital content in the instructional program	Ongoing	Various NPD department budgets and grants
5.1: Use data to inform and adjust technical, pedagogical, and financial support.	Continue to provide training in the use of on demand student achievement data	Ongoing	N/A
	Continue to provide training for administrators' data collection "walk through" tool and report generation	Ongoing	N/A
5.2: Provide support to help teachers disaggregate, interpret, and use data to plan, improve, and differentiate instruction.	Provide on-line, robust, easy to use system to support student assessment	Ongoing	ARA budget
	Continue to provide teacher training on how to use formative data instructionally	Ongoing	N/A
5.3: Promote the use of technology to inform the design and implementation of next-generation standardized assessments.	Investigate emerging learning assessment technologies	Ongoing	N/A
	Survey teachers and administrators to ascertain system requirements	Ongoing	N/A

Appendix 2: Acceptable Use Procedure

Acceptable Use Procedure for Computer Systems

Norfolk Public Schools (NPS) provides a full range of computer information systems, including Internet resources, for students and staff. NPS strongly believes in the educational value of such computer information systems and recognizes their potential in support of our curriculum and student learning goals.

The Norfolk Public Schools School Board adopts this Acceptable Use Policy, which outlines appropriate uses, ethics and protocol for the School Board's computer network.

School Board employees and students shall not use the division's computer equipment and communications services for sending, receiving, viewing, downloading, uploading inappropriate and/or illegal material via the Internet and World Wide Web.

A. The Superintendent or his/her designee shall select and operate technology that protects against, filters or blocks access through school division computers to visual depictions that are –
    a. child pornography, as set out in Virginia Code § 18.2-374.1:1 or as defined in 18 U.S.C. § 2256;
    b. obscenity, as defined in Virginia Code § 18.2-372 or 18 U.S.C. § 1460;
    c. material that Norfolk Public Schools deems to be harmful to juveniles, as defined in Virginia Code § 18.2-390, material that is harmful to minors, as defined in 47 U.S.C. § 254(h)(7)(G), and material that is otherwise inappropriate for minors;

B. The technology protection measure shall be utilized and enforced during any use of the division's computers by users.

C. The school administration shall monitor online activities of users.

D. The Superintendent or his/her designee shall select and operate technology and take administrative measures to protect the safety and security of users when using electronic mail, chat rooms, and other forms of direct electronic communications.

E. Users shall not obtain unauthorized access, including "hacking" and other unlawful activities, while online.

F. The School Board, its employees, agents and students shall not disclose, use, or disseminate personal identification information regarding users.

G. The Superintendent or his/her designee shall ensure that Norfolk Public Schools include a component on Internet safety for students that is integrated in the division's instructional program. This program includes appropriate use of social networking websites and cyberbullying awareness and response. (see Social Media Policy, GAZA)

NPS allows users access to electronic information systems while safeguarding them from potential hazard by filtering objectionable sites. Students and staff are allowed access to Internet resources with the understanding that some material may be inaccurate or objectionable. The use of inappropriate resources is not permitted. NPS does not endorse and is not responsible for content associated with links outside of the NPS network. Individuals using NPS electronic information systems are subject to monitoring by district personnel.

All use of the division's computer system must be (1) in support of education and/or research or (2) for legitimate school business. This resource, as with any other public resource, demands that those entrusted with the privilege of its use be accountable. Along with rights comes responsibilities, all users of electronic information systems are responsible for obeying rules and policies at all times. Users are held personally accountable for any and all activities logged to their computer identification "userid" and password. Any off campus activities that cause risk of disruption on campus are subject to school disciplinary action. NPS reserves that right to block downloading from specific file extensions and/or specific sites. NPS provides equitable access and encourages the use of electronic information systems, whenever and wherever possible and appropriate, to support the educational program.

- All users are responsible for ensuring that any disclosures of information complies with applicable state and federal statutes and regulations, including but not limited to the Family Educational Rights and Privacy Act (FERPA).
- All users authorized to access privileged information must understand and accept all responsibilities of working with confidential data. Responsibilities of protecting the privacy and confidentiality of the data include:
    - Properly storing and securing sensitive data on NPS approved secure mediums
    - Not misrepresenting or falsely manipulating/altering data
    - Not divulging any information to any person or organization without proper authorization.

- No identifiable photographs of students, faculty, or administration taken with NPS technology will be allowed to be published on the Internet or used in print without appropriate written consent. Photographs are the property of Norfolk Public Schools and will be used for instructional purposes only. Any photographs taken of students without parental permission will be strictly prohibited.

The failure of any student or staff member to follow the terms of this policy may result in the loss of Norfolk Public Schools' computer network privileges, disciplinary action and/or appropriate legal action.

Adopted July 1, 2015 Legal Reference: Code of Virginia § 22.1-70.2. Acceptable Internet use policies for public and private schools

Use of the electronic information systems provided by Norfolk Public Schools constitutes agreement to the standards and policies set forth by this document. All users are required to read this policy and sign the agreement statement prior to use. This AUP is in compliance with state and national telecommunications rules and regulations.

Employee Copy

Parent/Guardian (for all students under 18)

I have read the Norfolk Public Schools Acceptable Use Policy. I understand that access will be used for approved educational purposes. I also recognize that Norfolk Public Schools will make every reasonable attempt to ensure my child will not gain access to controversial or inappropriate materials.

I give permission for my child to access electronic information systems for the duration of my child's enrollment in NPS. I understand that I can deny permission for my child to use electronic information systems by submitting a letter of justification to my child's principal. I certify that the information contained on this form is correct.

Parent/Guardian Name (*please print*) _____

Parent/Guardian Signature _____

Date _____

Student/Staff

I have read the Norfolk Public Schools Acceptable Use Policy. I understand that access will be used for approved educational purposes. I understand and will obey the Norfolk Public Schools Acceptable Use Policy. I agree to comply with good conduct policies as set forth in this document. Any violation of this policy will result in the suspension of access privileges and may also be grounds for further disciplinary/legal action.

Are you employed by NPS (*please circle one*) Yes | No

Student/Staff Name (please print)

Student/Staff Signature

(Staff Only) Job Title

(Please Specify, i.e. Biology Teacher, 1st grade Teacher, etc.)

Department/School

Date

For Office Use Only (for new or changed employee information)

The employee has read and signed the NPS Policy (AUP) governing the security of NPS electronic systems and data. Please indicate the following information systems to which the employee needs access.

☐**New Account**

Faculty/Staff new to the school/department and needs access to the network.
Need access: (please check all that apply)

Network: ☐	Email: ☐	Synergy: ☐

*** For Munis Account Requests, use separate permissions forms**

Approval Authority *Must be completed and signed by Principal, Central Administration Director or Department Head:*
(Includes Norfolk Police Department & Juvenile Court Dept. Heads)

_____

Name & Title (please print)

_____

(Signature - Your request will not be processed without an authorized signature)

Please return student forms to:

School Office Manager Department
File in Cumulative Folder

Please return staff forms to:

Account Manager
Fax: 628-3840

Form-AUP808 (Revised 6/30/15)

Appendix 3: Internet Safety Program

The focus of creating a framework for Internet safety has emphasized the role of all stakeholders to practice Internet safety and responsibility. Due to the rapid saturation of technology and Internet access, a K-12 Internet safety program was implemented in compliance with Va Code 22.1-70.2 and aligned to the Virginia Department of Education's ***Guidelines and Resources for Internet Safety in Schools.*** This places all educators in an important position to familiarize K-12 children in the schools with cyberspace and to instill a set of appropriate online behaviors for safe and rewarding use of the Internet.

The use of the Internet is deeply imbedded in the practice and culture within the district. The division uses an internet filtering system and an Internet safety curriculum to support safe and ethical use of the Internet at all times. Internet safety tips are seen by all users all users upon login. Internet safety procedures are posted in classrooms, and integrated in library orientation. Additionally, Internet safety tips are broadcast on the daily school news programs. The Internet safety initiative is supported through multiple instructional activities and strategies that address current topics as we teach all stakeholders about being responsible digital citizens.